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NEW YORK TENEMENT HOUSE
COMMISSION, 1900.

SPECIAL REPORT

ON

HOUSING CONDITIONS AND
TENEMENT LAWS

IN

LEADING AMERICAN CITIES.

BY

LAWRENCE VEILLER, SECRETARY.

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HOUSING CONDITIONS AND TENEMENT LAWS

IN

LEADING AMERICAN CITIES.

PREPARED FOR

The Tenement House Commission

BY

LAWRENCE VEILLER, Secretary.

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105 EAST 22D STREET, NEW YORK CITY,
OCTOBER 17, 1900.

Mr. ROBERT W. de FOREST, *Chairman*,
Tenement House Commission.

DEAR SIR:—Permit me to submit herewith a report on housing conditions and tenement regulations in leading American cities. This report has been prepared from personal observation, from investigations carried on by correspondence in certain cities with persons in a position to know intimately the conditions of the houses of the poor in their own city, and also by a study of the laws and ordinances which I have collected. In nearly every case photographs have been taken of the worst housing conditions, and also of typical housing conditions in each of these cities, so as to verify the facts previously gathered; these photographs are available for use in any way deemed desirable.

Following the description of the housing conditions in each of these American cities will be found a comparative table of the more important building and health ordinances in each city as they affect tenement houses. I have also placed at the end of this report two appendices, one containing certain features of the different laws which are not included in the comparative table; these are arranged under a grouping similar to that employed in the table, namely, as Fire Provisions, Sanitary Provisions, etc. The other contains the exact text of those tenement house requirements in certain cities which seem to me to be of especial value. I would especially call the attention of the Commission to the provisions of the laws in the cities of Philadelphia and Washington.

Respectfully submitted,
LAWRENCE VEILLER,
Secretary,
Tenement House Commission.

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THE TENEMENT HOUSE COMMISSION OF 1900.

LAWRENCE VELLER, E. B. WHITNEY, WINTHROP E. DWIGHT,
Secretary. *Counsel.* *Associate Counsel.*

HOUSING CONDITIONS AND TENEMENT HOUSE REGULATIONS IN LEADING AMERICAN CITIES.

In America, there are few cities to-day, outside of New York, where there exists a tenement house problem and few where there exists even an acute housing problem ; although there are a number of cities where bad housing conditions have begun to manifest themselves.

Chicago, notwithstanding the fact of her large population of 1,698,575, has not as yet a "tenement house" problem, and the large high tenements housing great numbers of people upon a small area of land, which prevail to so great an extent in New York, are practically unknown in the western metropolis, although a few buildings of this type have recently been erected. In Chicago, most of the working people live in small one-story and two-story houses which are sometimes used by three or four families. These often are constructed of wood and are in all stages of dilapidation, and many of them without proper drainage. The rear tenement also prevails in Chicago to a great extent; as the lots there are, as a rule, 25 feet wide by 125 feet deep, it often happens that there are three buildings on the same lot—a front house two or three stories high, with perhaps two other wooden two-story buildings at the rear. In addition to these classes of buildings there can be found many old private dwellings converted into tenements and now occupied by three or more families, temporary wooden partitions having been erected to divide off the different rooms. The evil of cellar dwellings also prevails to a large extent.

Until the last year no attempt has been made in Chicago to remedy bad housing conditions or to prevent

Chicago. such conditions from increasing in the future. At the present time, however, a volunteer association, known as "The City Homes Association," is undertaking a thorough investigation of Chicago's tenement houses in certain districts, with the purpose of securing appropriate legislation so as to prevent that city from duplicating the evils of New York's tenement houses.

Although Chicago has no "tenement house" problem, still it has a number of tenement house ordinances looking toward the regulation of the sanitary condition of the city. These are to be found in what is known as the "Building Ordinance," passed by the City Council in 1898, and also in the Ordinances of the Department of Health. In general, most of these laws have been modeled on the laws of New York and Boston, certain changes having been made so as to be applicable to local conditions.

The Building Ordinance contains provisions in relation to the construction of shafts, height of fireproof buildings, construction of partitions, stairs, ventilation of rooms, size of air shafts, fire escapes, etc. Among these different provisions are many excellent ones, from which the following may be quoted: One in relation to partitions, provides that: "In all apartment houses the dividing walls or partitions provided for each family shall be made entirely of incombustible material." Another, in relation to the ventilation of rooms, provides that "no room shall be considered habitable or used as a habitation unless it has at least one window of an area equal to one-tenth of the superficial area of the room opening to the external air," and the law goes on to define what constitutes the external air, specifying the minimum size of air shafts that will be permitted; the minimum area for a three-story building being 36 square feet; for a four-story building, 46 square feet, and so on, increasing 10 square feet for each additional story in height. There is a further provision that if such open spaces or light shafts are covered over with a skylight or roof of any kind they shall

not be considered as the outer air and, also, that the space *Chicago*. left vacant must be left on land owned by the owner of the building in question.

A provision in relation to fire escapes requires that all tenement houses of four stories or more in height shall be provided both with metallic stand pipes and also with a system of metallic fire escapes in such location and number as the Commissioner of Buildings, the Fire Marshal and the Fire Escape Inspector may decide. There is a further clause to the effect that all such fire escapes shall be inspected after completion, and if found in a perfectly safe and satisfactory condition a certificate shall be issued by the Commissioner of Buildings to that effect, upon payment of a fee of \$1. The law also provides in very detailed manner the way in which fire escapes shall be constructed, specifying the size and the thickness of the iron to be used, and other similar minute details.

The ordinances of the Health Department contain a number of provisions, both in reference to sanitation and plumbing, and also in regard to light and ventilation of buildings of this class. These relate to drainage, to the general powers of the Board of Health in relation to light and ventilation, also to overcrowding, water-closet accommodations, construction of water-closets, the use of cellars as sleeping rooms, ventilation of sleeping rooms, ventilation of halls, the cleanliness of buildings, contagious diseases, condemnation of buildings unfit for habitation, percentage of lot to be occupied, space between front and rear tenements, space at rear of tenement houses, height of rooms, ventilation of rooms, chimneys, water supply, cellar floors, and other similar provisions. It is also provided in these ordinances that the Health Commissioner shall appoint five women as sanitary police, who shall have all the powers and perform all the duties of the regular sanitary police. In reference to the important subject of light and ventilation, the Board of Health is given the general power to prohibit any tenement from being erected or used which shall be inade-

Chicago. quate or defective in respect to light and ventilation. The Board is also given power to order any building to be vacated when such building, in the opinion of the Board, is unfit for human habitation, either because of its being infected with disease or from other causes likely to cause sickness among the occupants.

Another section regulates the amount of space that shall be left vacant between front and rear tenement houses, and is identical with the provisions of the New York law of 1867, requiring a space of 10 feet between the buildings if they are one story high; 15 feet when they are two stories, 20 feet when they are three stories, and 25 feet when they are over three stories high.

In addition to these local ordinances Chapter 24 of the Laws of the State of Illinois of 1889 requires that every architect or other person interested in any projected tenement house shall submit plans and specifications to the Health Commissioner for his approval or rejection, as to the ventilation of rooms, light and air shafts, windows, and drainage and plumbing.

The Chicago ordinances also contain a requirement in reference to the licensing of all architects, to the effect that "no permit shall be granted or plans approved unless such plans shall be signed and sealed by a licensed architect as provided for in an act 'to provide for the licensing of architects and regulating the practice of architecture as a profession in the State of Illinois, approved June 3, 1897.' A further section of these ordinances also provides that every person, agent, firm, company or corporation engaged within the limits of the city of Chicago in the construction or repairing of buildings, shall be required to obtain a license from the city of Chicago before carrying on such business; such license to expire at the end of each year. And it is further provided that any person who shall practice building without first having obtained a proper license shall be deemed guilty of a misdemeanor for each day's violation of the ordinance, and be subject to a fine for each offense of not less than \$25 nor more

than \$100. A nominal fee is charged for the issuing of the license.

Building Ordinance—An ordinance relating to the Department of Buildings and governing the erection of buildings, etc., in the City of Chicago, passed by the City Council, March 28, 1898.

Ordinances Governing and Pertaining to the Department of Health of the City of Chicago, passed April 18, 1881. Revised and authorized to be published as in force on the second day of April, 1890.

Laws, Ordinances and Regulations Relating to the Ventilation, Light, Drainage and Plumbing of Buildings—1896, as authorized by Chapter 24 of the Revised Statutes of Illinois, 1889.

Plumbing Ordinance in force 1896. .

Philadelphia, notwithstanding its large population of **Philadelphia**, 1,293,697, has for many years been justly proud of its reputation as the City of Homes. The tenement house system in this city is practically unknown, the great majority of the working people and poor people having individual homes, in most cases small houses with land around them, and seldom exceeding two stories in height. Occasionally such houses are occupied by three families, but this is the exception, not the rule. These conditions have resulted largely from a system of building small houses by the aid of building loan associations, there being great numbers of these organizations in this city. If one needed further testimony to prove that a system of tall tenement houses, accommodating on each 2,500 feet of land as many as 100 or 150 persons is unnecessary in our large cities, the experience of Philadelphia would afford ample evidence.

Although Philadelphia has not a "tenement house" problem, it, of course, has some bad housing conditions; the bad conditions, however, are limited to dilapidation and dirt—conditions which are not irremediable; also, bad conditions prevail to some extent in regard to drainage and sanitation. The laws and ordinances, however, relating to this subject are excellent, and in several respects might serve as a model for New York.

The Philadelphia building ordinances in regard to tenement houses have reference to the providing of fire escapes, the percentage of lot permitted to be occupied, the

Philadelphia. ventilation of rooms and halls, the size and height of rooms, methods of constructing stairways, water-closet accommodations, water supply, and other similar requirements. Among the most important provisions is one which requires that every new tenement house, or every building altered to be used as a tenement house, shall have attached to it at the rear, or at the side, an open space equal in area to at least 20 per cent. of the entire area of the lot upon which the tenement house is erected, this open space to be left entirely unobstructed.

The law further provides that no light shaft or open space shall be less than 8 feet wide and when between tenement houses or between wings of a tenement house shall be not less in width than 12 feet. There is also a further provision that no court or shaft shall be closed, but every one must be open, the law stating specifically that every court or shaft that shall be built for the purpose of furnishing light and air to any tenement house, shall open upon one side into the street or into the yard or open space. This requirement, however, does not apply to shafts used to ventilate only water-closets and bathrooms.

One section of the act provides that every room shall have at least one window opening either upon the street or upon the yard or on the open space above mentioned, and it is further required that the distance from every window to the wall or lot line opposite shall never be less than 8 feet. All halls are required to have windows opening either on the street or on the yard or other open space, and to have no room or other obstruction at the end. In reference to common hall-ways it is provided that common hall-ways shall not be used where it is possible to plan otherwise; and, further, that whenever in the judgment of the Chief of the Bureau of Building Inspection it shall be possible to construct tenement houses without corridors, and without connecting the entrances of several tenements or suites of rooms, then the Chief of the Bureau of Building Inspection may require that such

tenement house shall be so constructed that it shall contain no such corridors or common hallways. The act also requires that every habitable room shall be of such dimensions to contain at least 700 cubic feet of air space. A minimum width for all stairways and hallways of buildings of this class is also provided for, the law requiring that in houses containing less than fifteen rooms, the halls and stairways must be at least 3 feet in width; where such houses contain between fifteen and twenty-five rooms then the halls and stairs are required to be at least $3\frac{1}{2}$ feet in width, and where such buildings contain more than twenty-five rooms, then all stairs and halls must be 4 feet in width.

In reference to fire escapes the law provides that every tenement house shall be provided with an outside fire-escape composed of incombustible materials, and leaves to the Chief of the Bureau of Building Inspection discretion as to the number and location of such fire escapes for such buildings. In regard to sanitary arrangements it is required that in every new tenement house there shall be one water-closet for every tenement or suite of rooms, where a suite of rooms consists of only one room or two rooms there shall be at least one water-closet for every three of such rooms. It is further required that every water-closet apartment shall be separated from every other water-closet apartment, and shall have an entirely independent entrance.

In regard to fireproof construction the law requires that all tenement houses over four stories in height, erected, altered or constructed in the future, shall be made fire-proof throughout. A violation of the different provisions of the act is constituted a misdemeanor, and the person committing such violation upon conviction may be sentenced to imprisonment for not exceeding three months, or to pay a fine not exceeding \$500 or both, in the discretion of the court. In addition to the ordinances in regard to fire-escapes, there is an act of the assembly passed in 1897, requiring that all tenement houses shall

be provided with a permanent safe external means of escape in case of fire, independent of all internal stairways, and the act lays down in detail the method in which such fire-escapes shall be constructed, stating that they shall consist of open iron stairways of not more than 45 degrees slant and with steps not less than 6 inches in width and 24 inches in length. The law also specifically requires that a certificate shall be given to the owners of such buildings when they have provided fire-escapes upon them; and that in case a fire occurs in any building of this kind without proper fire-escapes approved by the certificate of the proper officials, the owner of the building shall be liable in an action for damages, in case of death or personal injury sustained in consequence of such fire breaking out in the building, and shall also be deemed guilty of a misdemeanor punishable by imprisonment for not less than six months nor more than twelve months.

Building Laws—Act of Assembly 123, approved May 5, 1899, entitled “An Act to create a Bureau of Building Inspection and to regulate the construction, maintenance and inspection of buildings and party walls in cities of the first class.”

Tenement House Law, Act of Assembly of June 7, 1895.

An Act approved June 30, 1885, authorizing Boards of Health in cities of the first class to regulate house drainage, the registration of master plumbers and the construction of cesspools.

Rules for the Government of the Board of Health of the City of Philadelphia, adopted in 1895.

Boston. After New York, Boston has the worst tenement house conditions of any American city. With a population of 560,892, and with a considerable foreign population, especially of Italians, Jews and Portuguese, it has in certain parts of the North End and West End a number of tall tenement houses fronting on narrow alleyways, in which large numbers of poor foreigners reside. The number of these tall houses is, however, quite limited and the buildings that are being erected at the present day represent great improvement upon the old type of building. Few of the tenement houses in Boston are more than five stories high, and the great majority are not over four

stories. The six and seven story tenement, so common in **Boston**. New York, is not known in this city; nor are the tenement houses so deep, and therefore do not cover so great a percentage of the lot, nor do they house so many people in one building as is done in New York. In the South End there are also bad housing conditions, although the problem there is not a distinctly tenement house problem, but more similar to the problem of Chicago, that is, the regulation and sanitary oversight of small two and three-story houses, each occupied by two or three families, and in which the evils of dirt, dilapidation and defective drainage are the main ones. For many years efforts have been made in Boston to improve the condition of the houses of the poor, with excellent results. A special committee of the Twentieth Century Club has been very active in agitating for tenement house reform, and there are also a number of companies building model tenements and others which buy up old houses, and alter them and gradually improve them. The Board of Health has also been energetic in recent years in condemning unsanitary property, and a considerable number of such buildings has been destroyed. Recently, with the development of better transit facilities, there has come a decided shifting of the working population into the suburbs, into small houses, accommodating one, or, at the most, two families, which have taken the place of the tenement house.

The laws in Boston in relation to tenements in many respects resemble the New York statutes, but in several particulars have improved upon them.

The Boston Tenement House Law is to be found in the act of 1892, and in subsequent acts, which contain many provisions upon this special subject. The law of 1892 required that all tenement houses erected after that date should be fireproof throughout. This remained the law until 1899, when it was materially changed, the law of that year requiring that no building thereafter erected in the City of Boston should be occupied above the second story by more than one family, unless it was

Boston. a first or second-class building; a first-class building being defined under the act as a building fireproof throughout, and a second-class building being defined as a building not of the first class, but one in which the external or party walls were of brick, stone or iron, or other equally substantial and equally incombustible material. This law also provided that no second-class building should be erected to a height greater than 65 feet, to be used as a tenement house, and that no wooden building more than three stories in height should be used for such a purpose, unless the basement and first story should be constructed fireproof; the act also contains a provision limiting the height of all buildings. This requires that no building shall be erected to a height exceeding two and a half times the width of the widest street on which the building stands.

In regard to fire escapes, it is provided that every tenement house shall have, with reference to its height, condition, construction, surroundings, character of occupation and number of occupants, sufficient means of egress in case of fire satisfactory to the Building Commissioner, and also that no building two stories or more in height shall thereafter be used as a tenement house, unless it is provided with at least two independent and sufficient ways of egress; one of these ways of egress to be a flight of stairs extending from the lowest to the highest floor, made of fireproof material and enclosed in brick walls. The other way of egress to be a flight of stairs approved by the Inspector of Buildings, and to be on the outside of the building. The law further provides that the owner of any building shall be entitled to a certificate to the effect that his building is provided with sufficient means of egress, if such is the case, in the Building Commissioner's opinion.

In regard to the percentage of lot permitted to be occupied by a tenement house the law states that no building above the second story level shall occupy more than 65 per cent. of the area of the lot, the measurement to be taken to the middle line of the street upon which the

building abuts. And every tenement house is required to **Boston**. have at least two exposures on the land of the owner, or as part of public ways, open spaces of at least 10 feet in width, these spaces to have an aggregate length of 1 foot for every 25 feet of superficial area actually occupied by the building; such space to be open to the sky and to remain undiminished so long as the building is occupied as a tenement house. In addition a clear space open from the ground to the sky must be maintained across the whole rear of every tenement house (except in the case of a corner building); this to be of a depth equal to one-half the width of the street in front of the building. A clause is added, however, to the effect that this space need not exceed a depth of 20 feet; and it is also provided that an equivalent area of open space in the rear or on either side of the building may be provided of different dimensions if the Building Commissioner gives his consent.

In regard to the ventilation of rooms, the law requires that every room in every tenement house erected in future, or in every building altered to be used as a tenement, shall have one or more windows on an open air space with an area at least one-tenth as great as that of the room.

In addition to the requirements for fire escapes upon buildings of this kind, there is a further provision with reference to those tenement houses which contain over fifty sleeping rooms above the first floor, to the effect that there shall be at least one night watchman in such buildings employed on duty every night, from nine o'clock at night until six in the morning; and where there are more than one hundred sleeping rooms above the first story, there shall be at least two night watchmen, or, in lieu thereof, a system of thermostats, or automatic fire alarms; and that in tenement houses of either of these classes a red light shall be kept burning at night at the head and foot of every flight of stairs, and one or more gongs shall be so placed as to give an alarm throughout the house in case of fire.

Boston. The tenement house act also provides that the halls on every floor shall open directly to the external air with suitable windows, and shall have no room or other obstruction at the end.

The conditions under which cellar or basement rooms may be occupied are set down in great detail and are practically identical with the New York law. Also the Board of Health is given the power to limit the number of occupants in any tenement house, or in any part of such a building; and if the specified number is exceeded, the Board may order the premises to be vacated.

In regard to buildings unfit for habitation, the Board of Health, under the provisions of the act of 1897, whenever they are of opinion that any building is infected with contagious disease, or because of want of repair has become dangerous to health, or is unfit for use because of defects in drainage or plumbing, or ventilation, or in the construction of the same, or because of the existence of a nuisance on the premises which is likely to cause sickness among its occupants, the Board may issue an order requiring all persons to vacate the building. The same act also gives the Board the power of condemning tenements unfit for habitation, providing that whenever, in the opinion of the Board of Health, any building or part thereof in the City of Boston is, because of age, infection with contagious disease, defects in drainage or plumbing or ventilation, or because of the existence of a nuisance on the premises which is likely to cause sickness among the occupants, or among the occupants of other property in the city, or because it makes other buildings in the vicinity unfit for human habitation or dangerous or injurious to health, or because it prevents proper measures from being carried into effect for remedying any nuisance injurious to health, or other sanitary evils in respect of such other buildings so unfit for human habitation that the evils cannot be remedied by repairs or in any other way except by destruction of the building or the burning of the building, the Board of Health is authorized

to order the building or part of the building to be removed, and if it is not removed the Board may have it removed at the expense of the city. It is further required that the city shall pay the damages sustained by the owner of the building by the destruction of it as determined in an agreement between the Board of Health and the owner, and if they cannot agree as to the amount of compensation, the same shall be determined by a jury of the Superior Court, on petition of the owner or board within one year after the destruction of the property, and in the same manner as damages are determined for the taking of land in the laying out of streets and highways in the city.

Statutes Relative to the Erection and Alteration of Buildings in the City of Boston, chapter 419 of the Laws of 1892 of the Commonwealth of Massachusetts, as amended by subsequent acts.

Tenement House Laws, chapter 97, Acts of 1895, as amended by chapter 161, Acts of 1899.

Acts of 1885, chapter 382, an Act in relation to the preservation of health and buildings in the City of Boston, as amended by chapter 219 of the Acts of 1897.

Baltimore, with a population of 509,957, has certain **Baltimore**. housing conditions peculiar to itself, though similar conditions exist in the City of Washington, a system of alleys prevailing in each of these cities, leading to certain sanitary abuses in the narrow streets hidden away from the public eye. In Baltimore, a little over one-fourth of the population own their own homes, the majority of the working people having an entire house for their own use. These houses contain from 4 to 6 rooms, renting from \$7 to \$8 per month and are only two stories high, and in many cases these buildings are occupied by two families.

In the special report of the United States Commissioner of Labor, on the slums in great cities, made in 1894, it appears that out of 4,028 families coming within the range of their investigation, and living in a very bad district of this city, 1,533 of these families lived in houses containing three families, but only 1,000 families lived in houses containing more than three families. This investigation was

limited to the very poorest and worst district of Baltimore. An investigation of the homes of the poor, throughout the whole city, would show a much smaller number of families to a house. On the whole the tenement house problem is unknown in Baltimore. The great majority of the poor people live in separate houses, and it is only in recent years that houses built for more than one family have begun to be occupied by two or three families.

The laws in Baltimore in relation to this subject are somewhat limited in their scope, and are to be found in the Revised City Code, and also in other ordinances.

Among the different provisions of the Baltimore building laws is one requiring that in any tenement house over three stories in height the first floor above the cellar shall be constructed fireproof. It is further provided that where there is a store on the first floor, or where the lower part of the building is to be used for business purposes of any kind, the second floor shall also be constructed fireproof.

In regard to stairs and halls, it is required that in any new tenement house over three stories in height the hall partitions and the partitions from front to rear from the cellar to the top of the second floor beams, and the entire stairway, must be built of fireproof material.

There are a number of other ordinances relating to fire-escapes, ventilation of sleeping-rooms, ventilation of halls, water-closet accommodations, drainage of yards, the conditions of occupancy of cellars or basement-rooms, overcrowding, &c., modeled very largely upon the requirements of the New York law.

Building Ordinance.—An ordinance (No. 146) relating to the inspection and construction of buildings in the City of Baltimore; City Code of 1893.

Ordinance (No. 211), approved May 13, 1899.

Ordinance (No. 79), approved 1886.

New Charter of Baltimore City, 1900, revised edition, Secs. 507-508.

Cleveland. Tenement houses in the City of Cleveland are practically unknown, notwithstanding the fact that the city has

a population of 381,768. The majority of the working people own their own homes, and even the very poorest people live in small one-story or two-story houses, few of them containing more than one family; probably not 5 per cent. of all the houses in Cleveland are occupied by more than one family. The rents or the better class of the houses for two families range from \$10 to \$15 per month for each family, there being only one family to a floor. Notwithstanding the fact that Cleveland has no tenement-house "problem," there are, however, a number of ordinances relating to this subject, being part of the general building law.

These ordinances relate to the providing of fire-escapes, the conditions under which cellar-rooms may be occupied, the height of rooms, the space between front and rear tenements, the size of light and air shafts, the ventilation of sleeping-rooms, and similar provisions. Among these requirements is one that no cellar shall be used for dwelling purposes unless the ceiling is at least 4 feet above the surface of the adjoining ground, and such rooms are required to be at least 8 feet high throughout. In regard to the space between front and rear tenement houses the provisions of the New York law have been enacted in Cleveland but with certain changes. It is required that when the front and rear buildings are one story high the space between them shall be 10 feet; when they are two stories high there shall be a space of 20 feet; when they are three stories high there shall be a space of 25 feet; and in every case the length of the space is to be not less than three-quarters the distance of the width of the buildings. Air shafts are required to be at least 3 feet wide in the clear, and such shafts must be at least 12 square feet in area for three-story houses, 16 square feet in area for four-story houses, and 20 square feet in area for five-story houses.

Building Law.—An act to amend Secs. 1, 5 and 11 of an act entitled "An act to regulate the construction of buildings within any city of the first class and second grade, and to provide for the appointment of an inspector of buildings, passed April 16, 1888." (Vol. 85, p. 289.)

Health Laws, Ch. 30 of Revised Ordinances.

Buffalo. The City of Buffalo, with a population of 352,387 persons, has not a tenement-house problem in the same sense that New York has, the majority of its buildings of this kind being small one and two-story dwellings. There are few large tenement houses in Buffalo, but almost no continuous block buildings, there being not more than fifty large buildings of this kind in the entire city.

The Buffalo laws define a tenement house as a house occupied by five families or more. There are only about 500 of these buildings in the entire city, but it is estimated that there are about 10,000 houses occupied by three families or more, which do not come within the scope of the law. A very large number of working people in Buffalo own their own homes; but there are also a number of buildings, formerly private residences, but now occupied by a number of families living in furnished rooms.

Buffalo has a very large Polish and German population, but it is only among the Italians that anything approaching tenement-house conditions exists.

There are a number of ordinances in Buffalo relating to tenement-house construction as well as to the regulation of such buildings from the point of view of sanitation. These have reference to the subjects of overcrowding, the vacating of buildings unfit for habitation, the providing of a janitor or a housekeeper in certain cases, the cleanliness of buildings, the regular inspection of tenements twice a year, the percentage of lot permitted to be occupied, the occupancy of cellars, the providing of fire-escapes, the construction of stairs, water supply, water-closet accommodations, the ventilation and height of rooms, overcrowding, and many other similar provisions.

Among the most important of these is one in reference to the amount of the lot to be permitted to be occupied by a building and the provisions for light and ventilation for such buildings.

Section 132 of these ordinances requires that every tenement house must have one or more "yard-courts," and may have "supplementary" or "inner" courts. (A

“ yard-court ” is defined as any court not open to the public way or park and contained entirely on the owner’s lot, but not less than 10 feet wide and containing at least 250 square feet in area; and a “ supplementary court ” is defined as a court opening on one side to a “ yard-court ” or to a public way or park, and such supplementary court must be at least 6 feet wide for one and two-story buildings, and at least 8 feet wide for three and four-story buildings, and 1 foot wider for each additional story above four stories. An “ inner court ” is taken to mean any court in the interior of a building for the purposes of a light-well, but in no case are “ inner courts ” to be less than 8 feet wide and 10 feet deep). The sum of the area of these different courts is required to be equal at least to 25 per cent. of the whole building lot, except in the case of a corner building, in which case this area shall not be less than 10 per cent. of the lot. It is further provided that if in any case 25 per cent. of the building lot shall not equal the size of the yard-court, then such lot shall not have a tenement house erected or maintained on it.

These provisions, of course, apply only to new tenement houses or buildings converted to be used as tenement houses, and do not apply to buildings already used for such purposes. There is also another requirement in reference to the height of tenement houses, this being regulated in proportion to the width of the open space, street or court on which the building faces, the law requiring that the walls shall not exceed 30 feet in height unless the building faces an open space or street more than 20 feet in width.

In regard to means of egress in case of fire, it is provided that in tenement houses more than two stories high there shall be at least two independent means of egress in each building, each of which shall be accessible from each apartment. In tenement houses where there are eight families or more, and where the buildings are more than three stories high, it is required that at least one red light shall be kept burning at night on every flight of

stairs, and that also one or more gongs shall be placed there so as to give an alarm through the house in case of fire. The law also provides in detail for the construction of stairs in such buildings.

With regard to the ventilation of rooms, the law provides that every room in every tenement house shall have one or more windows opening into the street, yard or court, with an area at least one-tenth as great as that of the room. Wooden tenements are strictly prohibited, no single frame dwelling being permitted which shall contain accommodations for more than two families. In all tenement houses the dividing walls or partitions between the apartments provided for each family must be made entirely of incombustible material, and, in the absence of definite subdivisions between the apartments of different families, it is deemed that eight rooms shall constitute the equivalent of one apartment.

Laws relating to the Construction, Maintenance and Inspection of Buildings in the City of Buffalo, in force July 1, 1896, as amended July 12, 1897.

Charter and Ordinances relating to the Department of Health of the City of Buffalo, in force August 1, 1897.

San Francisco. Although San Francisco has a population of 342,782, yet the tenement house is a thing unknown there. The great majority of the working people live in small houses, containing one or two families, each family having four to five rooms, for which they pay from \$13 to \$15 a month. The poorest houses for working men are the homes of the longshoremen, situated near the docks, and which are seldom more than two stories in height, and sometimes containing two families each, the rents ranging from \$8 to \$10 per month. There are a small number of houses, formerly the residences of well-to-do people in parts of the city that are now no longer fashionable, which are beginning to be turned into tenements, and in which wooden partitions have been erected to divide the rooms ; the number of these houses, however, is very limited. Having no tenement-house problem, San Francisco has almost no

laws on the subject, the only provisions, at all, on this subject being those relating to fire-escapes ; these provide in a very detailed manner the way in which such fire-escapes shall be constructed.

General Orders of the Board of Supervisors, providing regulations for the government of the City and County of San Francisco to November 10, 1898, pages 158-225.

Cincinnati, with a population of 325,902, after New *Cincinnati*. York and Boston, has the worst housing conditions of any city in America, and is like New York in one respect, in that it possesses nearly all kinds of bad housing conditions, from the large block buildings housing hundred of people, to the small dilapidated wooden house occupied by two or three families. As far as can be ascertained, the majority of the working people and of the poor people of Cincinnati live in tenement houses arranged for more than three families each, a considerable number of them living in large brick tenement houses in some respects similar to those in New York, though not so high, and in many ways better ; others find an abiding-place in old private dwellings converted into tenements, and many live in ramshackle, dilapidated buildings, and still others find shelter in picturesque house-boats, which move from place to place. Only a small number of the working people live in separate houses, the three and four-family house being the prevailing type.

Up to the present time little has been done to remedy bad housing conditions. In 1894 the Ohio Commissioner of Labor made a statistical inquiry into the condition of the tenement houses in the Third Ward, the poorest quarter of the city, but no practical changes in the conditions resulted.

One of the worst tenements in Cincinnati is the notorious building known as "Rat Row," the rear of the building being located on the river front, and the character of the tenants being of the very worst. The building contains over 100 rooms, occupied chiefly by negroes and low

whites, and is continually under police and sanitary surveillance.

The rents of the poorest tenements, the dilapidated wooden houses, range from \$5 to \$6 per month, especially in the negro quarter of the city.

The building and health ordinances contain a number of requirements in reference to the subject of tenement-house construction and regulation.

These provisions relate to the providing of fire-escapes, the construction of shafts, the ventilation of rooms, the percentage of lot permitted to be covered, water-closet accommodations, the condemnation of unsanitary buildings, and other similar provisions. It is to be noted that there is a requirement, in reference to the occupancy of cellars, to the effect that no cellar shall be used for living purposes unless it is properly drained, lighted and ventilated, and also unless its ceiling is at least $3\frac{1}{2}$ feet above the surface of the adjoining ground. Light and air shafts are required never to be less than 3 feet wide in the clear; and the Board of Health is given the power to order buildings unfit for habitation to be repaired and put in proper condition; if the owner fails to do this, the Board is authorized to make such alterations at the owner's expense.

An Ordinance (No. 218), passed August 15, 1898, to provide for the construction of, repair of, alteration in, and addition to buildings; to provide for the construction and erection of elevators and fire-escapes in and upon buildings; to provide for the removal and repair of insecure buildings, and to provide for the appointment of an inspector or inspectors of buildings.

Manual of the Department of Health of the City of Cincinnati, 1898.

Pittsburgh. Pittsburgh, with a population of 321,616, is one of the few American cities where bad housing conditions have been gradually increasing in recent years, so that the time has now arrived for taking steps in the way of preventing their further increase. While the problem in Pittsburgh is not like that of New York, yet in some respects they are analogous. There is a considerable foreign population,

especially of Poles, in this city, and the result is that over-crowding has already become evident in certain sections, although there are few large tenement buildings, the majority of the working people living in small two-story and one-story houses. A few of the worst buildings, however, are large wooden tenements containing a great many people ; also there are to be found in certain parts of the city a number of cellar dwellings, where the rooms are dark and damp, and there is a small part of the population living in wooden shanties on the outskirts of the town.

There are practically no laws in this city in relation to tenement houses, the only provisions being found in the general building and health ordinances. Among these may be noted one requiring that every new dwelling-house shall have an open space attached to it in the rear or at the side equal to at least 144 square feet, unobstructed by any other structure. This practically comprises all the law in relation to buildings of this class in this city.

Code of Laws and Ordinances relating to the Bureau of Building Inspection, and governing the erection of buildings, &c., in the City of Pittsburgh, 1896.

Manual of Laws, Rules and Regulations relating to the Public Health and the Construction and Inspection of Plumbing and House Drainage, 1895.

Act of Assembly (258), approved June 26, 1895.

Act of Assembly (306), approved July 2, 1895.

Although the City of New Orleans has a population of **New** 287,104, yet tenement houses are practically unknown in **Orleans**. This city. The poor people who in some of the other cities live in large tenements, in New Orleans live in small houses, generally only one story high, and having openings on all sides, with yards and plenty of space in front of the buildings. There are hardly any cases in the entire city where there can be found three families living in one building, and there are very few cases where there are even as many as two families living in the same house. The beginning of bad housing con-

ditions is, however, to be noted in the fact that there are a number of old dwelling-houses formerly occupied by wealthy people in neighborhoods which at one time were fashionable, which are now occupied by a number of poor people, and overcrowding is beginning to show itself in a few buildings of this class. New Orleans has no tenement-house laws, although there are a few city ordinances prescribing the fire limits and regulating the construction of buildings generally.

Detroit. Although the City of Detroit has a population of 285,704, yet it has no housing problem at all and tenement houses are unknown. The homes of the majority of the working men and poor people of the city are for the most part thoroughly comfortable, and most of the people live in separate houses, there being very few houses throughout the city where there are as many as three families in one building, and only a small number of cases where there are two families living in the same house. There are absolutely no block buildings or tenements whatsoever. A few of the very poorest people live in old houses, which have formerly been used as residences of the rich, but which are now abandoned. In this class of buildings are usually to be found two or three families. The great majority of the working men, however, own their own homes, which are usually one or two-story cottages, worth from \$800 to \$2,000. The average rent paid by the ordinary working man is from \$8 to \$10 a month for a whole house, containing six good-sized rooms, with water in the kitchen.

There are no special provisions in the building laws or health laws in regard to tenement houses in this city, for obvious reasons; there is, however, a rule of the Board of Health in regard to the ventilation of water-closet compartments which should be noted. This is to the effect that in tenement houses no less than one water-closet must be provided for two families, and that in every case the water-closet compartment must be open to the outer air or be ventilated by a shaft or air duct, which shall not be used for ventilating any habitable room.

Building Ordinance.—An ordinance relative to the prevention of fires and the establishment of the fire limits in the City of Detroit, and to repeal Chapter 85 of the Revised Ordinances of 1884, approved January 13, 1890.

Health Ordinance.—An act to establish a Board of Health for the City of Detroit, approved February 27, 1895.

Rules and Regulations governing the Bureau of Sanitary Plumbing, House Drainage and Ventilation of the Health Department of the City of Detroit.

The population of Milwaukee is very nearly the same *Milwaukee*, as that of Detroit, being 285,315 persons, and the housing conditions in both cities are very similar. Throughout the entire city there are very few tenement houses, the majority of the working people living generally in cottages of which they are the owners. There are no large tenement buildings and only a very limited number of buildings occupied by as many as two families.

The building ordinances naturally, therefore, contain few provisions in reference to this subject, although there are certain general provisions in relation to all buildings which affect buildings of this class. These are in reference to the size of light shafts, the providing of fire-escapes, the height of basement rooms, the ventilation of rooms, the construction of partitions between apartments, and other similar provisions. In regard to basement rooms, such rooms are not to be used for dwelling purposes or for sleeping apartments unless they are 8 feet in height and unless also the ceilings are at least 4 feet above the grade of the street. In regard to partitions between the different apartments, it is required that in all tenement houses such partitions between the apartments provided for each family shall be made entirely of incombustible material, or shall be constructed with stud partitions filled their full thickness and height with mineral wool, brick or other incombustible material and plastered on metal lath. In tenement houses it is also required that all stairways shall be at least 5 feet wide.

Building Ordinance.—Ordinance No. 53—An ordinance relating to the Construction, Maintenance and Inspection of Buildings in the City of Milwaukee, passed May 13, 1895, as amended by ordinance No. 28, passed April 13, 1896.

Washington. In Washington housing conditions are very similar to the conditions in Baltimore, although the former city has certain evils which prevail to a somewhat greater extent than they do in the latter. The worst conditions in Washington are to be found in buildings located on alley-ways and narrow streets hidden from the public eye. The great majority of the working people, however, live in small frame or brick buildings, generally in separate houses. There are probably not over one hundred houses in the entire city that are occupied by as many as three families, the majority of the houses being two-family houses. In 1896 a thorough investigation of the worst housing conditions in the city was made by the Civic Center. This investigation extended to 35 alleys and 191 dwellings, and the result showed that the conditions in many of the alleys in the city needed prompt action on the part of the authorities.

Many houses were found to be in a very bad sanitary condition, a number being without proper water supply, others having no sewer connections, and many privies and closets were found to be in a very unsanitary condition; also other buildings were so old and dilapidated as not to be fit for human habitation. Conditions in respect to light and ventilation, however, were found to be very good, as nearly every room had at least one window to the outer air.

The greatest problem, however, in Washington is the "alley problem," resulting as it does in shutting off small communities from public notice, and thus rendering the opportunity for immorality and crime very great.

There are a number of laws in Washington in relation to tenement houses to be found in the regulations governing the construction of buildings and also in the regulations of the health department. These provisions relate to the percentage of lot permitted to be occupied, the height of rooms, the ventilation of rooms, the providing of water-closet accommodations, the size of rooms, over-crowding, the vacation of buildings unfit for habitation,

and other similar requirements. Among these one requirement may be especially noted; this is a provision of the act adopted in 1899 requiring that from and after that date no combustible or non-fireproof building intended to be occupied as a residence or as a tenement house should be erected to a height of more than five stories, and also an important requirement in the same act that no building should be erected or altered on any street in the District of Columbia to exceed in height above the sidewalk the width of the street in its front, such width being held to be the distance between building lines. There are also a few special provisions in reference to the building of tenement houses upon alleys of narrow width, it being deemed unlawful to erect a dwelling house on any alley less than 30 feet wide or where it was not supplied with sewerage, water mains and light.

Among the different health regulations governing tenement houses in the City of Washington is one which is analogous to the system of regulation of overcrowding of buildings in vogue in the Scotch cities of Glasgow and Edinburgh, known as the system of "ticketed houses." Under the provisions of the Washington health regulations, adopted April 22, 1897, the health officer is authorized, if in his judgment it is necessary to prevent overcrowding, to have affixed to or near the door of each room in such buildings a placard stating the number of occupants allowed under the regulations of the Board of Health; and in cases where such a placard has been affixed to the room of the building, the health officer is required to cause a notice to be served on the owner or persons having charge of the premises. It is further required by the terms of this regulation that no person having the authority to prevent it shall permit a greater number of persons than are specified on such a placard to occupy any such room as a sleeping-room.

Regulations governing the Erection, Removal, Repair and Electric Wiring of Buildings, and the Erection and Operation of Elevators and Fire-Escapes in the District of Columbia, July 31, 1897.

Laws and Regulations relating to Public Health in the District of Columbia, in force January 13, 1898.

Louisville. The City of Louisville, with a population of 204,731 persons, has practically no tenement houses. Over three-fourths of the working people live in separate houses, the typical house being a cottage containing from three to five rooms. There are, however, a number of two-family houses in the city, arranged for one family on each floor. The only buildings that can really be called tenement houses are the old private residences in neighborhoods which are no longer fashionable, and in which now a number of foreigners reside. In some of these buildings there is some overcrowding, but the number of such residences, however, is small.

Louisville has no special laws or ordinances in relation to buildings of this class, although the general building ordinances contain one or two references to the subject. One provision requires that partitions in such buildings, when made of scantlings and intended to be lathed or plastered, shall be filled in with brick work from the bottom of the floor joists to a point 8 inches high beyond the floor line, between the scantlings; and another provision requires that all buildings over six stories high shall be fireproof.

An Ordinance to regulate the Construction, Alteration, Repairing and Removal of Buildings, and the Occupancy and Obstruction of Streets and Alleys, approved March 3, 1894.

An Ordinance concerning the Erection of Fire-Escapes, approved February 16, 1898.

Minneapolis. The City of Minneapolis, with a population of 202,718, has no distinct housing problem as yet, the majority of the poor people and working people living in small one-story and one-and-a-half-story cottages, mostly of wood. There are very few houses occupied by as many as three families, as the great majority of the people live in separate houses, although there are a number of buildings occupied by as many as two families.

There are practically no special laws in reference to tenement houses in this city, although the building ordinances contain a definition of a tenement house and also

include a few provisions in reference to such buildings in regard to fire-escapes and scuttles.

Building Ordinance.—An ordinance to regulate the construction, alteration, repair and removal of buildings within the City of Minneapolis, approved May 5, 1899.

Health Ordinance.—An ordinance relating to the preservation of health and the prevention and suppression of disease in the City of Minneapolis, passed June 25, 1897.

Although the City of Providence is one of our older *Providence* cities and has a population of 175,597, yet it cannot be said to have a tenement-house problem, although there are in the city a few tenement houses accommodating as many as eight families, or even more. The majority, however, of the working people live in wooden houses; built separately, with plenty of light and air around each. The sanitary conditions, on the whole, are good, excepting in certain parts of the city where old private residences have been abandoned and are now being used by several families. A considerable proportion of the working people also live in two-family houses, and in certain sections, notably along the water front, housing and sanitary conditions are not as good as they should be.

The general building and health ordinances of Providence contain certain provisions in reference to tenement houses. These relate to the construction of hall partitions, scuttles, fire-escapes, the ventilation of rooms and halls, and similar requirements, and in many cases are modeled after the different requirements of the New York laws.

Building Laws.—Revised laws regulating the construction, alteration and removal of buildings, also the plumbing laws and schedule of water and gas rates of the City of Providence, 1897.

Health Ordinances.—Revised Rules of the Board of Aldermen of the City of Providence, 1899, Chapter 1, Board of Health.

Kansas City, with a population of 163,752, is one of *Kansas City*. those few American cities where housing conditions are gradually assuming a phase where it will be necessary to take legislative action looking toward their remedy. Many of the people live in dilapidated, tumble-down

shanties, and there are also a number of cases where persons are lodged in rooms partly underground, in damp basements.

The building ordinances contain a number of requirements in regard to tenement houses which are in nearly every case modeled after the first New York tenement house law, enacted in 1867; these relate to the construction of fire-escapes, the space between front and rear tenements, the ventilation of halls and rooms, the height of rooms, water supply, size of windows, conditions of occupancy of basements and cellars, and other similar requirements.

Building Ordinance.—Ordinance 258, approved January 15, 1898.—An ordinance to regulate the construction and inspection of buildings.

St. Paul. St. Paul has no tenement-house problem, although it has a population of 163,065, in which there is a considerable foreign element. There are very few houses occupied by as many as three families, and a great many of the buildings contain only one family each. The typical working man's home is a wooden building, generally one story or one and a half stories high, for which a rent of from \$3 to \$4 a month is paid. In a great majority of cases, however, these buildings are owned by the occupants.

St. Paul has no special laws bearing on the subject of tenement houses. The general building and health laws, however, contain a few provisions in reference to the construction of partitions and the providing of fire-escapes and other similar requirements.

Building Ordinance.—Ordinance 340.—An ordinance to regulate the construction and plumbing of buildings within the City of St. Paul, and to provide for the appointment of a building inspector, approved June 26, 1883.

An Act to regulate and control the construction of buildings and structures, and the disposition of dangerous structures within the limits of the city of St. Paul, approved March 1, 1887.

Rochester. Although the City of Rochester has a population of 162,608, yet it is distinctly a city of homes. The great majority of the working people live in separate cottages,

containing five to seven rooms each, with a small yard in front of or at the side of the building, the rents of these cottages ranging from \$1.50 to \$3.00 a week. There are only a few tenement houses in the whole city, very few houses being arranged for three families. Rochester has no special laws or ordinances in relation to this subject, although the general building and health ordinances contain certain requirements that have a bearing upon this special class of buildings. One of these provides that no single frame dwelling shall be erected which shall contain accommodations for more than four families. Among the health regulations is one in reference to overcrowding, which provides that no owner, lessee or keeper of any tenement house shall cause or allow it to be overcrowded or allow so great a number of persons to dwell or be in such a house as to cause danger or detriment to health. It is further added that whenever it shall be reported to the Board of Health by the Health Officer that any tenement house or any room in such a building is so overcrowded that there shall be less than 500 cubic feet of air to each occupant of a room, the Board of Health, if it considers it necessary, may issue an order requiring the number of occupants to be so reduced that the inmates shall not exceed one person to each 500 cubic feet of air space.

And whenever the Board of Health decides that any building or part of a building is unfit for human habitation because the building is in an unsanitary condition from any cause whatsoever, the Board is authorized to order the building to be vacated within a certain number of days.

Building Ordinance.—An ordinance relating to buildings, passed May 11, 1897.

Health Ordinance.—Ordinances and plumbing rules adopted by the Board of Health of the City of Rochester, 1895.

Denver, notwithstanding its population of 133,859, has **Denver**. no tenement houses. The poor people there live in small one-story houses, which generally contain from three to

six rooms and have plenty of land around them, such buildings renting from \$4 to \$12 a month.

The City of Denver has no special tenement-house laws, although the building and health ordinances contain certain provisions in reference to this subject; these relate to the construction of partitions and shafts, the ventilation of rooms and water-closet apartments, the construction of scuttles and means of egress in case of fire, as well as to light and ventilation and overcrowding. Among these different requirements may be noted one requiring that all buildings over six stories in height shall be of wholly fireproof construction, also a provision that every habitable room in a tenement house shall have at least one window communicating directly with the outer air, and that no shaft or court of a less area than 40 square feet in three-story buildings, or of a less area than 50 square feet in four-story buildings, and so on, increasing 10 feet for each additional story, should be considered as being the outer air, and such open space or light shaft if covered over with a skylight or roof of any kind was not considered as fulfilling the requirements of the law. And no water-closet is allowed to ventilate into a shaft which ventilates habitable rooms, unless such shaft is more than 8 feet in its least dimension. In regard to overcrowding, there is a regulation of the Board of Health, that the occupants of every room shall be so limited in number that no less than 700 cubic feet of air space with sufficient means for its frequent renewal shall be provided for each person.

Building Ordinance No. 38.—Series of 1898.—An ordinance regulating the construction and inspection of buildings and parts of buildings, and providing for the care, use and maintenance of the same, and repealing all ordinances and parts of ordinances in conflict with this ordinance.

Plumbing Ordinance.—No. 23, of 1892.

Health Ordinance.—Manual of the Bureau of Health, City of Denver, January 1, 1899.

Toledo. The City of Toledo, notwithstanding its large population of 131,822, has no tenement-house problem and practicall no tenement houses.

Toledo, however, has a number of ordinances relating to the construction and occupancy of such buildings. These ordinances are to be found in the general building and health ordinances of the city; they pertain to such subjects as light and air shafts, scuttles, fire-escapes, basement rooms, height of rooms, ventilation of rooms, construction of water-closets, overcrowding, etc.

Among these may be noted one in relation to the occupancy of basement rooms, which requires that the height of any basement used for dwelling purposes or for sleeping apartments shall be not less than 8 feet, and that the height of the ceilings of such rooms shall be not less than 4 feet above the grade of the adjoining ground.

Building Ordinance.—An ordinance relating to the construction, maintenance and inspection of buildings in the City of Toledo.

Health Ordinance.—Standing orders and regulations adopted by the Board of Health of the City of Toledo, October 13, 1897.

Columbus has a population of 125,560, but has no tenement-house problem. **Columbus.**

There are no tenement-house laws, although the general building ordinances contain certain requirements relating to such buildings; one of these provides that no cellar shall be used for dwelling purposes unless it is 8 feet in height from the floor to the ceiling, and is also at least 4 feet above the surface of the ground adjoining; the space also allowed between front and rear tenements is specified, this provision being similar to the Chicago law upon the subject. There are also a few provisions in regard to light and air shafts for habitable rooms, it being specified that no shaft shall ever be less than 3 feet wide in the clear, and that such shaft shall be at least 12 square feet in area for three-story houses, 16 square feet in area for four-story houses and 20 square feet in area for five-story houses.

Building Ordinance.—A law regulating the construction of buildings in cities of the first grade, second class, and to provide for the appointment of an inspector of buildings therein, passed February 23, 1888.

Health Ordinance.—Rules and regulations for the construction of

plumbing and house drainage, recommended by the Ohio State Board of Health, July, 1896.

An Act to Promote the Public Health and Regulate the Sanitary Construction of House Drainage and Plumbing, passed April 21, 1896.

Syracuse. Although Syracuse has a population of 108,374 persons, yet it has no tenement-house problem, the great majority of working people and poor people living in separate houses. There are very few houses in this city occupied by as many as three families, though there are a number of two-family houses. And there are no special tenement-house laws; the only requirements upon these subjects being found in the general building ordinances; these relate to the construction of hall partitions, the providing of fire-escapes, and other similar subjects.

Building Law.—Chapter 288, Laws of 1891.—An Act further to amend Chapter 26 of the Laws of 1885, entitled “An Act to Revise, Amend and Consolidate the several Acts in Relation to the City of Syracuse, and to Revise and Amend the Charter of Said City.”

Nashville. The City of Nashville has a population of 80,865, but has no tenement-house problem. The white laborers and poor people of that city live in cottages with yards sufficiently large to afford fresh air and even a place in which the children can play. Occasionally there are cottages constructed for two families each, one family living in each side of the house, but in hardly any cases are there to be found more than two families living in the same house. The rents of such buildings average from \$2 to \$6 a month. The colored people live somewhat differently from the whites, their houses, as a rule, being more dilapidated and smaller, but even among them there is no overcrowding and the houses are seldom more than one story high.

There are no special tenement-house laws or ordinances in Nashville, the only requirements on this subject being found among the general building and health ordinances; among these may be noted one which prohibits the occupancy of buildings unfit for habitation. This provides that the occupation or letting for occupation as a

dwelling of any room or building within the city limits which from its construction, location, state of repair or other good and sufficient cause is unfit for human habitation is prohibited and declared to be a misdemeanor and to be punishable by a fine of not less than \$5 or more than \$50. Another section of these ordinances provides that whenever it shall be certified to the inspectors of dwellings that any house or room within the city limits is so overcrowded that there shall be less than 600 cubic feet of air to each occupant, the inspectors of dwellings may, if they deem it necessary, issue an order requiring the number of occupants of the building or room to be reduced, so that the inmates shall not exceed one person to each 600 cubic feet of air space

In order to strictly enforce these provisions, the Mayor and the Chairman of the City Board of Health, together with the Inspector of Buildings, are constituted a Commission to be known as the Inspectors of Dwellings. This Commission is also given the power, where buildings are unfit for habitation, to order them vacated and also to condemn them.

City Ordinances, Chapter 3, Department of Health, and regulations as to dwellings and inspectors of dwellings; Chapter 4, Department of Buildings.

Hartford, with a population of only 79,850, has for its **Hartford**. size the worst housing conditions in the country, the conditions there being in many respects very similar to those of Boston. Not only are there old, dilapidated wooden and brick buildings, which formerly were private residences, now occupied by several families, but also there are numerous tenement houses, erected for the special purpose of housing a number of people, and lately there have been erected a number of flats and tenement houses on the same plan as the New York "double-decker, dumb-bell" tenement, with small air-shafts. These conditions, however, do not prevail to any great extent, and there is still time to remedy the evil before matters grow worse. But it is absolutely essential that something should be

Hartford. done soon to check the growth of these bad conditions before it is too late. There are great numbers of houses throughout the city, however, occupied by two or three families, one family occupying each floor.

Hartford has practically no special laws upon this subject, beyond the general requirements of the Board of Health in regard to light and ventilation; these regulations provide that no building intended for human habitation shall be erected, or altered or repaired unless the owner or his representative shall have first submitted the plans and specifications of the building in regard to the ventilation and light and drainage to the Board of Health, and received from them their approval; and the board is also given the further power to approve, reject or modify such plans, and to issue such written instructions in relation to this work as it may deem proper for the protection of health.

Building Ordinance.—An ordinance creating building inspector, City of Hartford, 1896.

An ordinance in relation to the erection of buildings in the City of Hartford, 1896.

An Act concerning fire-escapes, passed June 29, 1895.

Plumbing Rules of the Board of Health, and the ordinances concerning plumbing and the registration of plumbers, September 1, 1897.

A Comparative Table of Some of the More Important Provisions of the Laws, Ordinances, &c., Relating to Tenement Houses

WENTY-SEVEN AMERICAN CITIES.

City	New York	Chicago	Philadelphia	St. Louis	Boston	Baltimore	Cleveland	Buffalo	San Francisco	Cincinnati	Pittsburgh	New Orleans	Detroit	Milwaukee	Washington	Jersey City	
Population (census of 1900)	3,437,202	1,684,573	1,233,037	570,328	500,892	508,327	581,789	524,387	514,782	525,324	521,616	267,104	265,504	285,315	276,718	209,433	
Residential House Problem	Serious out.	Housing problem begins to worsen. No decent house problem.	No tenement house problem.	No tenement house problem.	It's a tenement house problem.	No tenement house problem.	No tenement house problem.	No tenement house problem.	No tenement house problem.	No tenement house problem.	No tenement house problem.	No tenement house problem.	No tenement house problem.	No tenement house problem.	No tenement house problem.	Tenement house problem.	
Fire Protection.	Escape in case of fire	All fire, over three stories high to have E. and stand pipes.	All fire, to have pipes, E. and stand pipes.	Every fire, except for 2 or more families above 21 ft. high.	Every fire, to have pipes, E. and stand pipes.	Every fire, to have pipes, E. and stand pipes.	Every fire, to have pipes, E. and stand pipes.	Every fire, to have pipes, E. and stand pipes.	Every fire, to have pipes, E. and stand pipes.	Every fire, to have pipes, E. and stand pipes.	Every fire, to have pipes, E. and stand pipes.	Every fire, to have pipes, E. and stand pipes.	All fire, over 3 stories high to have E. and stand pipes.	Every fire, to have pipes, E. and stand pipes.	All fire, over 3 stories high to have E. and stand pipes.		
Details of Construction.	Left in the discretion of the Commissioner of Buildings.	Specified in the law, subject to be satisfied by Building Dept. when completed.	Specified in the law, subject to be satisfied by Building Dept. when completed.	Left in the discretion of the Commissioner of Buildings.	Details left in discretion of Building Commissioner, except in case of fire, when individual ways of escape are to be provided in brick walls.	Left in discretion of Inspector of Buildings.	Left in discretion of Inspector of Buildings.	Left in discretion of Building Commissioner.	Details specified in Inspector of Buildings.	Left in discretion of Inspector of Buildings.	Left in discretion of Building Commissioner.	Left in discretion of Building Commissioner.	Left in the discretion of Inspector of Buildings and Chief of Fire Department.	Left in the discretion of Commissioner of Buildings.	Left in the discretion of Commissioner of Buildings.	Details specified in law.	
Examination of F. E.	Tenanted. Occupant should be present at first and fire of 40 ft.	—	—	F. E. to be kept free from combustibles.	F. E. to be kept free from combustibles.	Publication of special permit provided.	Publication of special permit provided.	F. E. to be kept free from combustibles.	Publication of special permit provided.	Publication of special permit provided.	Publication of special permit provided.	Publication of special permit provided.	No obstruction shall be placed in any way of egress or any building.	—	—	—	
Hall and Stair Partitions.	Every ten over 3 stories and containing 2 or more halls and stairs to be 12 ft. high. Every ten over 3 stories to have halls and stairs showing or 4 ft.	—	—	In ten, brick partitions from foundation to roof.	—	—	—	—	—	—	—	—	—	—	—	—	
Partitions between Apartments.	Wood & stiles, no glazing or partitions.	To be made entirely of incombustible material.	—	—	—	—	—	—	—	—	—	—	—	To be made of incombustible material.	Space between partitions to be filled with incombustible material.	—	
Stairs, Corridors, etc.	Escalator and light and ventilation to be 12 ft. high. It is required to have 10 ft. of clear headroom.	In less than 3 stories high to be 12 ft. high. In other cases to be 12 ft. of incombustible material.	—	—	—	—	—	Walls of light shall be of incombustible material.	—	—	—	—	—	—	—	All shafts to be filled.	
Wooden Trusses.	May be built for 6 families over 3 stories high.	No wooden bldg. to exceed height of 45 ft.	—	—	No wooden bldg. to be over 45 ft. high.	—	—	No single wooden bldg. permitted for more than 2 families.	No wooden bldg. permitted over 55 ft. high.	Not to be over 3 stories.	—	—	—	Wooden buildings not to exceed 45 ft. high.	No wooden buildings to exceed 3 stories or 40 feet.	No wooden bldg. over 45 ft. high.	
Fireproof Trusses, when Required.	If bldg. is over 10 ft. high.	If bldg. is over 100 ft. high.	All new, over 4 stories high.	If over 10 ft. high.	If over 10 ft. high.	If over 100 ft. high.	—	—	If over 12 ft. high.	If over 90 ft. high.	—	—	—	If over 100 ft. high.	If over 5 stories.	—	
LIGHT AND VENTILATION PROVISIONS	Space between Front and Rear Traverses.	1 1/2 stories, 10 ft. 12 stories, 15 ft. 20 stories, 20 ft. 30 stories, 25 ft. If over 3 stories, 25 ft.	1 1/2 stories, 10 ft. 12 stories, 15 ft. 20 stories, 20 ft. 30 stories, 25 ft. If over 3 stories, 25 ft.	No space to be less than 12 ft.	—	To have space of 30 ft. between them for the whole width of the bldg.	If 1 story, 10 ft. If 2 stories, 20 ft. If 3 stories, 25 ft. and each story 1/4 the width of the bldg.	—	Int. lot, 90% above 1st story, and for each additional story decrease 2 1/2%.	For new dwelling to have an open space of 114 square feet.	—	—	—	Space of 10 feet to be left at rear.	—	—	
Percentage of Lot to be Occupied	Cor. lot, 22% above 1st story. Int. lot, 70% above 1st story. Left in discretion of Commissioner of Buildings.	Cor. lot, 20% above 1st story. Int. lot, 60% above 1st story. Left in discretion of Commissioner of Buildings.	40% measured at 4th floor level measured to the middle line of the street on which it sits.	—	—	Int. lot, 60% above 1st story, and for each additional story decrease 2 1/2%.	For new dwelling to have an open space of 114 square feet.	—	—	—	—	—	—	—	—	—	
Air and Light Shaft (Enclosed Space)	Minimum width 28 inches. Requires fireproofing. It is to be considered as free space.	For 3 story ten, 36 sq. ft. For 4 stories, 40 sq. ft. For 5 stories, 45 sq. ft. For 6 stories, increasing 10 sq. ft. per story, 8 ft. minimum width between flats. 12 ft. height.	Open space at side or rear of bldg. not more than 10 ft. deep, 8 ft. minimum width between flats. 12 ft. height.	—	Minimum areas.	For 3 story ten, 12 sq. ft. If 4 stories, 16 sq. ft. If 5 stories, 20 sq. ft. minimum width, 3 ft. height.	Every ten, fireproofed bldg. to be at least 10 ft. wide, 8 ft. high and 12 ft. deep. 8 ft. minimum width of the street in front of bldg.	—	Minimum areas.	For 3 story ten, 12 sq. ft. If 4 stories, 16 sq. ft. If 5 stories, 20 sq. ft. minimum width, 3 ft. height.	—	—	—	Minimum Areas. For 3 story ten, 12 sq. ft. If 4 stories, 16 sq. ft. If 5 stories, 20 sq. ft. and increasing 10 sq. ft. for each story not to be roofed over.	—	—	
Light and Ventilation, General Requirements.	No building to be located in regard to light and ventilation.	All bldgs. to be properly lighted and ventilated.	Any ten not properly lighted and ventilated declared to be unsafe.	Bl. of Health power to regulate.	Bl. of Health power to regulate.	—	All ten. to be properly ventilated.	—	—	—	—	—	—	Text to be properly ventilated.	No ten. to be converted if defective or inadequate in ventilation.	—	
Rooms, Ventilation, etc.	Each room to have window opening to the outer air. Otherwise not allowed.	Every room to have window opening to the outer air. Otherwise not allowed.	Every room to have window opening to the outer air.	Every room to have window opening to the outer air.	Every room to have window opening to the outer air.	—	Every room to have window opening to the outer air.	—	—	—	—	—	—	Every room to have window opening to the outer air.	Every room to have window opening to the outer air.	—	
Rooms, Height of.	Minimum, 8 ft.	Minimum, 8 feet.	Minimum, 8 ft.	—	—	Minimum, 8 ft.	Minimum, 7 ft.	Minimum, 8 ft.	—	Minimum, 7 ft.	—	—	—	Minimum, 8 ft.	Minimum, 8 ft.	Minimum, 8 ft.	
Halls, Landing and Vestibules of.	Halls on each floor to open directly to outer air or to other stories through them or to a vestibule in roof.	Same as New York.	Same as New York.	—	Same as New York.	Halls to have roof or skylight.	To be 8 ft. high.	—	—	—	—	—	—	—	—	—	
Height of Tenants, Limitations.	Not more than 12 ft. on roof level, 10 ft. wide. Not more than 10 ft. on stories over 12 ft. wide.	10 or 4 stories high most. If 4, throughout.	Not less than 12 ft. in any case, and not over 21 times the distance from the street on which it sits.	—	Not over 125 ft. in any case, and not over 21 times the distance from the street on which it sits.	—	Not over 20 feet on streets or courts less than 20 ft. wide.	—	—	—	—	—	—	Not to exceed 21 the distance from face of bldg. to middle of street.	Not to exceed the width of the street in front of bldg. or over 30 ft. for residences.	—	
Sanitary Provisions	1. Room to be 7 ft. high. 2. Ceiling to be 2 ft. above ground.	—	—	—	Same as New York, except that ceiling is to be 1 ft. above ground.	Ceiling to be 3 ft. above ground, 8 ft. or more high or has not to be occupied.	1. Room to be 8 ft. high. 2. Ceiling to be 4 ft. above ground, 8 ft. or more high or has not to be occupied.	Xu cellar to be used as a dwelling place or place of sleeping.	1. Room to be 7 ft. high. 2. Ceiling to be 8 ft. above ground.	—	—	—	1. Room to be 8 ft. high. 2. Ceiling to be 4 ft. above ground.	1. Room to be 8 ft. high. 2. Ceiling to be 4 ft. above ground.	1. Room to be 8 ft. high. 2. Ceiling to be 4 ft. above ground.		
Cells and Washrooms, Conditions of Occupants.	Conditions of occupants.	—	—	To be occupied with 4 stories of height.	To be watertight, enclosed with 4 stories of height.	To be enclosed with 4 stories of height.	To be enclosed with 4 stories of height.	Xu cellar to be used as a dwelling place or place of sleeping.	To be occupied with 4 stories of height.	—	—	—	To have a best of hydraulic power to washroom or to circulate 2 ft. high or paved with brick laid in cement.	To have a best of hydraulic power to washroom or to circulate 2 ft. high or paved with brick laid in cement.	To have a best of hydraulic power to washroom or to circulate 2 ft. high or paved with brick laid in cement.		
Cellar Floors.	To be watertight. To be covered or enclosed with 4 stories of height.	To be watertight, enclosed with 4 stories of height.	To be watertight, enclosed with 4 stories of height.	To be watertight, enclosed with 4 stories of height.	To be watertight, enclosed with 4 stories of height.	To be enclosed with 4 stories of height.	To be enclosed with 4 stories of height.	Xu cellar to be used as a dwelling place or place of sleeping.	To be occupied with 4 stories of height.	—	—	—	—	—	—		
Water Supply	Every ten. to have water supply at one or more places to be adequately directed by Bl. of Health.	To have water at one or more places to be adequately directed by Bl. of Health.	To have independent water supply and sink for each family to be adequately directed by Bl. of Health.	To have water at one or more places to be adequately directed by Bl. of Health.	To have water at one or more places to be adequately directed by Bl. of Health.	Bl. of Health to reduce number of occupants of any ten. or part. Bl. of Health is directed bldg. to be occupied.	—	—	—	—	—	—	—	Notes to be used unless water is plentiful or supply of water is good or more than 100 ft. in height. To be adequately directed.	—	—	
Leakiness of Buildings	Every ten. and every part to be leaky.	Same as New York.	—	—	Bl. of Health to reduce number of occupants of any ten. or part. Bl. of Health is directed bldg. to be occupied.	Every ten. and every part to be leaky.	—	Same as New York, except that falling in hole, bldg. is a misdemeanor.	—	—	—	—	—	Every ten. and every part to be leaky as required by Bl. of Health.	—	—	
Walls and Washrooms	To be walls which are required to be 10 ft. high.	Every ten. to have walls and ceiling to be 10 ft. high. Between April and May.	Walls and ceiling to be 10 ft. high and washroom or otherwise required to be 10 ft. high.	—	Bl. of Health to reduce number of occupants of any ten. or part. Bl. of Health is directed bldg. to be occupied.	Walls and ceiling to be 10 ft. high and washroom or otherwise required to be 10 ft. high.	—	—	—	—	—	—	—	Notes to be used unless water is plentiful or supply of water is good or more than 100 ft. in height. To be adequately directed.	—	—	
Underground-Cable Air Space	Bl. of Health to reduce number of occupants of any ten. or part. Bl. of Health is directed bldg. to be occupied.	Overrunning prohibited. No specific amount of space.	Every ten, to have 100 cubic feet of air space for all occupants.	—	Bl. of Health may limit number of occupants of any ten. or part. Bl. of Health is directed bldg. to be occupied.	—	—	Bl. of Health to reduce number of occupants of any ten. or part. Bl. of Health is directed bldg. to be occupied.	—	—	—	—	—	Every ten. to have 100 cubic feet of air space for all occupants.	Every ten. to have 100 cubic feet of air space for all occupants.	—	
Water Cisterns in Cellars for Habitability	When required by law or by Bl. of Health, to be 100 cubic feet in capacity. When required by Bl. of Health, to be 100 cubic feet in capacity.	Bl. of Health for habitability.	Same as New York.	—	—	—	—	—	—	—	—	—	—	Every ten. to have 100 cubic feet of air space for all occupants.	Every ten. to have 100 cubic feet of air space for all occupants.	—	
Foundation of Tenements.	When required by law or by Bl. of Health, to be 100 cubic feet in capacity.	One W. C. for every 2 families. M. & F. not allowed in yard or street.	Open W. C. for every 2 families. When there are no porches and porches are 8 ft. high or more.	Every ten, to have 100 cubic feet of air space for all occupants.	—	—	—	—	—	—	—	—	—	Notes to be used unless water is plentiful or supply of water is good or more than 100 ft. in height. To be adequately directed.	Notes to be used unless water is plentiful or supply of water is good or more than 100 ft. in height. To be adequately directed.	Notes to be used unless water is plentiful or supply of water is good or more than 100 ft. in height. To be adequately directed.	
Water Closet Drawers and Ventilators	Separate, enclosed in cabinet.	Not to be installed in any room, to have water to sink for wash.	Not to be in sleeping apartments, and to have water to sink for wash.	To have water to sink for wash.	—	—	—	Not to be in sleeping apartments, and to have water to sink for wash.	—	—	—	—	—	Notes to be used unless water is plentiful or supply of water is good or more than 100 ft. in height. To be adequately directed.	Notes to be used unless water is plentiful or supply of water is good or more than 100 ft. in height. To be adequately directed.	Notes to be used unless water is plentiful or supply of water is good or more than 100 ft. in height. To be adequately directed.	
Definitions of Tenement House.	Any house occupied or to be occupied for more than 2 families living independently, or for more than 10 persons, or for more than 100 cubic feet of air space.	Not to be installed in any room, to have water to sink for wash.	Not to be in sleeping apartments, and to have water to sink for wash.	To have water to sink for wash.	—	—	—	Not to be in sleeping apartments, and to have water to sink for wash.	—	—	—	—	—	Notes to be used unless water is plentiful or supply of water is good or more than 100 ft. in height. To be adequately directed.	Notes to be used unless water is plentiful or supply of water is good or more than 100 ft. in height. To be adequately directed.	Notes to be used unless water is plentiful or supply of water is good or more than 100 ft. in height. To be adequately directed.	
Fire Protection.	Escape in case of fire	All fire, over three stories high to have E. and stand pipes.	All fire, to have pipes, E. and stand pipes.	Every ten, except for 2 or more families above 21 ft. high.	Every fire, to have pipes, E. and stand pipes.	Every fire, to have pipes, E. and stand pipes.	Every fire, to have pipes, E. and stand pipes.	Every fire, to have pipes, E. and stand pipes.	Every fire, to have pipes, E. and stand pipes.	Every fire, to have pipes, E. and stand pipes.	Every fire, to have pipes, E. and stand pipes.	Every fire, to have pipes, E. and stand pipes.	Every fire, to have pipes, E. and stand pipes.	Every fire, to have pipes, E. and stand pipes.	Every fire, to have pipes, E. and stand pipes.		
Details of Construction.	Left in the discretion of the Commissioner of Buildings.	Specified in the law, subject to be satisfied by Building Dept. when completed.	Specified in the law, subject to be satisfied by Building Dept. when completed.	Left in the discretion of the Commissioner of Buildings.	Details left in discretion of Building Commissioner, except in case of fire, when individual ways of escape are to be provided in brick walls.	Left in discretion of Inspector of Buildings.	Left in discretion of Inspector of Buildings.	Left in discretion of Building Commissioner.	Details specified in Inspector of Buildings.	Left in discretion of Inspector of Buildings.	Left in discretion of Building Commissioner.	Left in discretion of Building Commissioner.	Left in the discretion of Inspector of Buildings and Chief of Fire Department.	Left in the discretion of Commissioner of Buildings.	Left in the discretion of Commissioner of Buildings.	Details specified in law.	
Examination of F. E.	Tenanted. Occupant should be present at first and fire of 40 ft.	—	—	F. E. to be kept free from combustibles.	—	Publication of special permit provided.	Publication of special permit provided.	F. E. to be kept free from combustibles.	Publication of special permit provided.	Publication of special permit provided.	Publication of special permit provided.	Publication of special permit provided.	No obstruction shall be placed in any way of egress or any building.	—	—	—	
Hall and Stair Partitions.	Every ten over 3 stories and containing 2 or more halls and stairs to be 12 ft. high. Every ten over 3 stories to have halls and stairs showing or 4 ft.	—	—	In ten, brick partitions from foundation to roof.	—	—	—	—	—	—	—	—	—	—	—	—	
Partitions between Apartments.	Wood & stiles, no glazing or partitions.	To be made entirely of incombustible material.	—	—	—	—	—	—	—	—	—	—	—	To be made of incombustible material.	Space between partitions to be filled with incombustible material.	—	
Stairs, Corridors, etc.	Escalator and light and ventilation to be 12 ft. high. It is required to have 10 ft. of clear headroom.	In less than 3 stories high to be 12 ft. high. In other cases to be 12 ft. of incombustible material.	—	—	—	—	—	Walls of light shall be of incombustible material.	—	—	—	—	—	—	—	All shafts to be filled with incombustible material.	
Wooden Trusses.	May be built for 6 families over 3 stories high.	No wooden bldg. to exceed height of 45 ft.	—	—	No wooden bldg. to be over 45 ft. high.	—	—	No single wooden bldg. permitted for more than 2 families.	No wooden bldg. permitted over 55 ft. high.	Not to be over 3 stories.	—	—	—	Wooden buildings not to exceed 45 ft. high.	No wooden buildings to exceed 3 stories or 40 feet.	No wooden bldg. over 45 ft. high.	
Fireproof Trusses, when Required.	If bldg. is over 10 ft. high.	If bldg. is over 100 ft. high.	All new, over 4 stories high.	If over 10 ft. high.	If over 10 ft. high.	If over 100 ft. high.	—	—	If over 12 ft. high.	If over 90 ft. high.	—	—	—	If over 100 ft. high.	If over 5 stories.	—	
Light and Ventilation Provisions	Space between Front and Rear Traverses.	1 1/2 stories, 10 ft. 12 stories, 15 ft. 20 stories, 20 ft. If over 3 stories, 25 ft.	1 1/2 stories, 10 ft. 12 stories, 15 ft. 20 stories, 20 ft. If over 3 stories, 25 ft.	No space to be less than 12 ft.	—	To have space of 30 ft. between them for the whole width of the bldg.	If 1 story, 10 ft. If 2 stories, 20 ft. If 3 stories, 25 ft. and each story 1/4 the width of the bldg.	—	Int. lot, 90% above 1st story, and for each additional story decrease 2 1/2%.	For new dwelling to have an open space of 114 square feet.	—	—	—	Space of 10 feet to be left at rear.	—	—	
Percentage of Lot to be Occupied	Cor. lot, 22% above 1st story. Int. lot, 70% above 1st story. Left in discretion of Commissioner of Buildings.	Cor. lot, 20% above 1st story. Int. lot, 60% above 1st story. Left in discretion of Commissioner of Buildings.	40% measured at 4th floor level measured to the middle line of the street on which it sits.	—	—	Int. lot, 60% above 1st story, and for each additional story decrease 2 1/2%.	For new dwelling to have an open space of 114 square feet.	—	—	—	—	—	—	—	—	—	
Air and Light Shaft (Enclosed Space)	Minimum width 28 inches. Requires fireproofing. It is to be considered as free space.	For 3 story ten, 36 sq. ft. For 4 stories, 40 sq. ft. For 5 stories, 45 sq. ft. For 6 stories, increasing 10 sq. ft. per story, 8 ft. minimum width between flats. 12 ft. height.	Open space at side or rear of bldg. not more than 10 ft. deep, 8 ft. minimum width between flats. 12 ft. height.	—	Minimum areas.	For 3 story ten, 12 sq. ft. If 4 stories, 16 sq. ft. If 5 stories, 20 sq. ft. minimum width, 3 ft. height.	Every ten, fireproofed bldg. to be at least 10 ft. wide, 8 ft. high and 12 ft. deep. 8 ft. minimum width of the street in front of bldg.	—	Minimum areas.	For 3 story ten, 12 sq. ft. If 4 stories, 16 sq. ft. If 5 stories, 20 sq. ft. minimum width, 3 ft. height.	—	—	—	Minimum Areas. For 3 story ten, 12 sq. ft. If 4 stories, 16 sq. ft. If 5 stories, 20 sq. ft. and increasing 10 sq. ft. for each story not to be roofed over.	—	—	
Light and Ventilation, General Requirements.	No building to be located in regard to light and ventilation.	All bldgs. to be properly lighted and ventilated.	Any ten not properly lighted and ventilated declared to be unsafe.	Bl. of Health power to regulate.	Bl. of Health power to regulate.	—	All ten. to be properly ventilated.	—	—	—	—	—	—	Text to be properly ventilated.	No ten. to be converted if defective or inadequate in ventilation.	—	
Rooms, Ventilation, etc.	Each room to have window opening to the outer air. Otherwise not allowed.	Every room to have window opening to the outer air. Otherwise not allowed.	Every room to have window opening to the outer air.	Bl. of Health power to regulate.	Bl. of Health power to regulate.	—	Every room to have window opening to the outer air.	—	—	—	—	—	—	Every room to have window opening to the outer air.	Every room to have window opening to the outer air.	—	
Rooms, Height of.	Minimum, 8 ft.	Minimum, 8 feet.	Minimum, 8 ft.	—	—	Minimum, 8 ft.	Minimum, 7 ft.	Minimum, 8 ft.	—	Minimum, 7 ft.	—	—	—	Minimum, 8 ft.	Minimum, 8 ft.	Minimum, 8 ft.	
Halls, Landing and Vestibules.	Halls on each floor to open directly to outer air or to other stories through them or to a vestibule in roof.	Same as New York.	Same as New York.	—	Same as New York.	Halls to have roof or skylight.	To be 8 ft. high.	—	—	—	—	—	—	—	Minimum, 8 ft.	Minimum, 8 ft.	Minimum, 8 ft.
Height of Tenants, Limitations.	Not more than 12 ft. on roof level, 10 ft. wide. Not more than 10 ft. on stories over 12 ft. wide.	10 or 4 stories high most. If 4, throughout.	Not over 125 ft. in any case, and not over 21 times the distance from the street on which it sits.	—	Not over 125 ft. in any case, and not over 21 times the distance from the street on which it sits.	—	Not over 20 feet on streets or courts less than 20 ft. wide.	—	—	—	—	—	—	Not to exceed 21 the distance from face of bldg. to middle of street.	Not to exceed the width of the street in front of bldg. or over 30 ft. for residences.	—	
Sanitary Provisions	1. Room to be 7 ft. high. 2. Ceiling to be 2 ft. above ground.	—	—	Same as New York, except that ceiling is to be 1 ft. above ground.	Ceiling to be 3 ft. above ground, 8 ft. or more high or has not to be occupied.	1. Room to be 8 ft. high. 2. Ceiling to be 4 ft. above ground, 8 ft. or more high or has not to be occupied.	Xu cellar to be used as a dwelling place or place of sleeping.	Xu cellar to be used as a dwelling place or place of sleeping.	1. Room to be 7 ft. high. 2. Ceiling to be 8 ft. above ground.	—	—	—	—	1. Room to be 8 ft. high. 2. Ceiling to be 4 ft. above ground.	1. Room to be 8 ft. high. 2. Ceiling to be 4 ft. above ground.	1. Room to be 8 ft. high. 2. Ceiling to be 4 ft. above ground.	
Cells and Washrooms, Conditions of Occupants.	Conditions of occupants.	—	—	To be occupied with 4 stories of height.	To be watertight, enclosed with 4 stories of height.	To be enclosed with 4 stories of height.	To be enclosed with 4 stories of height.	Xu cellar to be used as a dwelling place or place of sleeping.	To be occupied with 4 stories of height.	—	—	—	—	To have a best of hydraulic power to washroom or to circulate 2 ft. high or paved with brick laid in cement.	To have a best of hydraulic power to washroom or to circulate 2 ft. high or paved with brick laid in cement.	To have a best of hydraulic power to washroom or to circulate 2 ft. high or paved with brick laid in cement.	
Cellar Floors.	To be watertight. To be covered or enclosed with 4 stories of height.	To be watertight, enclosed with 4 stories of height.	To be watertight, enclosed with 4 stories of height.	To be watertight, enclosed with 4 stories of height.	To be watertight, enclosed with 4 stories of height.	To be enclosed with 4 stories of height.	To be enclosed with 4 stories of height.	Xu cellar to be used as a dwelling place or place of sleeping.	To be occupied with 4 stories of height.	—	—	—	—	—	—	—	
Water Supply	Every ten. to have water supply at one or more places to be adequately directed by Bl. of Health.	Same as New York.	—	To have water at one or more places to be adequately directed by Bl. of Health.	Bl. of Health to reduce number of occupants for all occupants.	Bl. of Health to reduce number of occupants for all occupants.	Bl. of Health to reduce number of occupants for all occupants.	Bl. of Health to reduce number of occupants for all occupants.	Bl. of Health to reduce number of occupants for all occupants.	—	—	—	—	Notes to be used unless water is plentiful or supply of water is good or more than 100 ft. in height. To be adequately directed.	—	—	
Leakiness of Buildings	Every ten. and every part to be leaky.	Same as New York.	—	Bl. of Health to reduce number of occupants for all occupants.	Bl. of Health to reduce number of occupants for all occupants.	Bl. of Health to reduce number of occupants for all occupants.	Bl. of Health to reduce number of occupants for all occupants.	Bl. of Health to reduce number of occupants for all occupants.	Bl. of Health to reduce number of occupants for all occupants.	—	—	—	—	Every ten. and every part to be leaky as required by Bl. of Health.	—	—	
Walls and Washrooms	To be walls which are required to be 10 ft. high.	Every ten. to have walls and ceiling to be 10 ft. high. April and May.	Walls and ceiling to be 10 ft. high and washroom or otherwise required to be 10 ft. high.	Bl. of Health to reduce number of occupants for all occupants.	Walls and ceiling to be 10 ft. high and washroom or otherwise required to be 10 ft. high.	Walls and ceiling to be 10 ft. high and washroom or otherwise required to be 10 ft. high.	Walls and ceiling to be 10 ft. high and washroom or otherwise required to be 10 ft. high.	Walls and ceiling to be 10 ft. high and washroom or otherwise required to be 10 ft. high.	Walls and ceiling to be 10 ft. high and washroom or otherwise required to be 10 ft. high.	—	—	—	—	Every ten. and every part to be leaky as required by Bl. of Health.	—	—	
Underground-Cable Air Space	Bl. of Health to reduce number of occupants for all occupants.	Overrunning prohibited. No specific amount of space.	Every ten, to have 100 cubic feet of air space for all occupants.	—	—	—											



A Comparative Table of Some of the More Important Provisions of the Laws, Ordinances, &c., Relating to Tenement Houses.

TWENTY-SEVEN AMERICAN CITIES

CERTAIN TENEMENT HOUSE REGULATIONS IN AMERICAN CITIES NOT CONTAINED IN THE TABULAR STATEMENT.

FIRE PROVISIONS.

Scuttles.—The laws of nearly every one of the cities included in this report contain provisions requiring all buildings to have scuttles in the roofs, of a certain minimum size, generally 18 inches by 30 inches, with stationary ladders leading to them, and in most cases there is a further provision that these scuttles shall never be locked, but may be secured on the inside by bolts or hooks so as to be readily opened. The following cities contain provisions of this kind, varying slightly in their details: Philadelphia, St. Louis, Boston, Baltimore, Cleveland, Buffalo, San Francisco, Cincinnati, Pittsburgh, Milwaukee, Washington, Jersey City, Louisville, Minneapolis, Providence, St. Paul, Rochester, Denver, Toledo, Columbus, Syracuse and Hartford.

Stairways.—In some of the cities there are provisions as to the width of the stairs. In Chicago the law requires that stairs in tenement houses shall be adapted in number and width to the area and height of the building, and that there shall be provided for each building at least two flights of stairs, and that where such a building covers 2,000 square feet of ground area, the stairs shall be at least 3 feet wide each, and for every 500 additional square feet of ground area covered by the building the stairs shall be increased 6 inches in width. *The Philadelphia law* requires that all stairways and hallways must not be less than 3 feet in width in tenement houses containing less than fifteen rooms, and where there are between fif-

teen and twenty-five rooms in one house, the stairways and halls must be at least 3 feet 6 inches wide; and in houses containing more than twenty-five rooms, these stairs and halls must be at least 4 feet wide; also that the rise of the stairs shall not exceed 8 inches and the treads must be at least 9 inches in depth. *The Buffalo law* is quite similar, requiring that the rise of steps shall not be greater than 8 inches nor the tread less than 9 inches in depth. *The Milwaukee law* requires that in tenement houses the stairs and halls shall be constructed in the same manner as in theatres or public halls, that is, that no stairway shall be less than 5 feet in width in the clear.

Fire Construction, Beams, Etc.--The Baltimore law provides that in any tenement house over three stories in height, or any such building occupied by three or more families above the first story, the first floor above the cellar shall be constructed fireproof, and that when the lower part of such building is to be used for business purposes of any kind the second floor shall also be constructed fireproof.

Precautions Against Fire -- Alarms, Watchmen, Gongs, Etc.--A few of the cities contain provisions requiring watchmen in buildings of this kind at night. The city of *Boston* requires that in every tenement house where there are more than fifty sleeping rooms above the first story there shall be at least one night-watchman exclusively employed as a watchman every night from nine o'clock at night till six o'clock in the morning, and that where there are one hundred rooms or more above the first floor in any such tenement house, there shall be at least two night-watchmen; but it is provided that a system of thermostats or automatic fire-alarms may be substituted for one of the watchmen. It is also required that a red light shall be kept burning at night at the head and foot of every flight of stairs in such buildings, and that one or more gongs shall be so located as to readily give an alarm throughout the house in case of fire. *The Buffalo law* has very similar provisions, except that in Buffalo these

provisions apply to any tenement house containing more than twenty sleeping-rooms above the first floor. In such buildings the Health Commissioner is authorized to require that there shall be one or more night-watchmen on duty every night. Also in tenements containing eight families or more, and which are at the same time more than two stories high, it is required that least one red light shall be kept burning at night on every flight of stairs and that one or more gongs shall be so located as to give an alarm throughout the house in case of fire, and that all doors of exit or entrance shall open outwardly, and that buckets of water shall be kept on hand in a convenient place in such buildings.

Combustible Articles, Storage of, Prohibited.—The storage of combustible articles is pretty generally prohibited in most of our cities, the cities of Chicago, Boston, Pittsburgh, Washington and Syracuse having special requirements upon this subject.

Cellar Entrance.—In addition to the above requirements, from the point of view of safety from fire, there is to be found in the Buffalo law a provision that every dwelling house occupied by two or more families above the first story shall be provided with an entrance to the cellar from the outside of the building. This is the only city with the exception of New York which has a requirement of this kind.

SANITARY PROVISIONS.

Chimneys.—The laws of Chicago, St. Louis, Buffalo, Providence and Kansas City all require that for every tenement house, newly erected, there shall be adequate chimneys running through every floor, with an open fireplace or place for a stove for every family and set of apartments.

Janitor Required.—In the cities of Boston and Buffalo there is a requirement that whenever there are more than eight families living in a tenement house, in which the owner does not reside, there shall be a janitor, or house-

keeper, or some other responsible person, who shall reside in the house and have charge of it, if the Board of Health shall so decide; and in the City of Washington this is required whenever there are more than five families residing in a tenement house, instead of more than eight.

Ashes and Garbage, Receptacles for.—Most of the large cities contain a specific provision in their laws that proper receptacles for ashes and garbage and other refuse matter shall be provided in tenement houses. The cities which have such specific requirements are Chicago, Philadelphia, St. Louis, Boston, Buffalo, Kansas City, Cincinnati and Washington.

Animals, Keeping of, Prohibited.—The cities of Chicago and Boston prohibit the keeping of certain animals in tenement houses.

Roofs to be Kept in Repair.—The laws of Chicago, Baltimore, Washington, Providence and Nashville all contain requirements that the roofs of tenement houses shall be kept in repair so as not to leak.

Yards and Areas.—In the Chicago laws, and also in the laws of Baltimore, Buffalo and Washington, there is a special provision that yards and areas of tenement houses shall be properly graded and drained, and in some cases paved or cemented.

Contagious Diseases to be Reported.—The health provisions of the Chicago, Boston and Buffalo laws require that whenever any person in a tenement house is sick with fever or with any infectious, pestilential or contagious disease, and such sickness is known to the owner or to any responsible person having charge of the house, the owner shall give immediate notice of such sickness to the Board of Health, and the Board shall thereupon cause the house to be inspected and cleansed or disinfected in such manner as they may deem necessary, with a further provision that the blankets, bedding and bed clothes used by any such sick person shall be thoroughly cleansed and fumigated, and may in extreme cases be destroyed.

Definition of "Cellar."—In nearly every city the building laws contain a definition of a "cellar," and in a great majority of cases a cellar is defined to be any basement or lower story of a building of which one-half or more of the height from the floor to the ceiling is below the level of the adjoining ground. Such a definition is to be found in the laws of Chicago, St. Louis, Boston, Baltimore, Buffalo, San Francisco, Providence, Rochester and Hartford.

The laws of these cities in a number of cases also contain provisions in reference to the administration of the law in each case, having special reference to such subjects as the appointment of sanitary police, the remedy of injunction in cases of violation of the statute, the right of public officials to enter such buildings, the registration of the names of owners of tenement houses, the semi-annual inspection of such buildings, and a few other similar requirements. As these requirements exist in so few of the cities, and as they contain no unusual features, they are not included in this report.

THE TEXT OF CERTAIN TENEMENT HOUSE REQUIRE-
MENTS IN SEVERAL AMERICAN CITIES,
TO WHICH ATTENTION IS ESPECI-
ALLY CALLED.

Condemnation of Buildings Unfit for Habitation.

Boston.—(Chapter 219 of the Act of 1897 of the Commonwealth of Massachusetts. An Act for the further protection of the public health in the City of Boston.)

SECTION 1. Whenever, in the opinion of the Board of Health, any building or part thereof in said city is, because of age, infection with contagious disease, defects in drainage, plumbing or ventilation, or because of the existence of a nuisance on the premises which is likely to cause sickness among its occupants, or among the occupants of other property in said city, or because it makes other buildings in said vicinity unfit for human habitation or dangerous or injurious to health, or because it prevents proper measures from being carried into effect for remedying any nuisance injurious to health, or other sanitary evils in respect of such other buildings, so unfit for human habitation that the evils in or caused by said building cannot be remedied by repairs or in any other way except by the destruction of said building or of any portion of the same, said Board of Health may order the same or any part thereof to be removed; and if said building is not removed in accordance with said order said Board of Health shall remove the same at the expense of the city.

SEC. 2. The City of Boston shall pay the damages sustained by the owner of the building by the destruction of the same, or part thereof, as determined on agreement between said Board of Health and said owner, and if they

cannot agree the same shall be determined by a jury of the Superior Court for the County of Suffolk, on petition of said owner or board within one year after said destruction, in the same manner as damages are determined for the taking of land in laying out streets and highways in the City of Boston.

Definition of Tenement House.

Boston.—(Chapter 419 of the Laws of 1892 of the Commonwealth of Massachusetts, as amended.) Section 17. “Tenement House” means a building which, or any portion of which, is occupied, or intended to be occupied, as a dwelling by more than three families living independently of one another and doing their cooking upon the premises; or by more than two families above the first story so living and cooking; and includes apartment houses, family hotels and flat houses, where families are so living and cooking.

Fees for Permits.

Philadelphia.—(An ordinance to regulate and determine the license fee for permits in the Bureau of Building Inspection, Department of Public Safety, as required by Section 41 of the Act of Assembly, approved June 8, 1893; approved March 28, 1894.)

SECTION 1. The select and Common Councils of the City of Philadelphia do ordain, That where any person or persons shall be desirous of erecting, constructing or altering any house or building, such person or persons shall make application at the office of the Bureau of Building Inspection for a permit for that purpose, and shall pay for such permit the various sums as follows:

For the inspection of each or any building not exceeding thirty (30) feet in height and eighteen (18) feet in width, and not exceeding a superficial area of sixteen hundred (1,600) square feet, the fee shall be three (\$3) dollars.

For the inspection of each or any building over eighteen (18) feet in width not exceeding thirty (30) feet in

height, and not exceeding in superficial area two thousand (2,000) square feet, the fee shall be five (\$5) dollars, and the further sum of one (\$1) dollar in addition for each story above thirty feet in height, and a like sum of one (\$1) dollar for each additional one thousand (1,000) square feet of ground covered by such house or building.

For the inspection of heating apparatus and flues in all buildings in which the same has not been heretofore introduced the fee shall be one (\$1) dollar.

For the inspection of buildings for which application is made for repair or alteration, the fee shall be two (\$2) dollars.

For the inspection of buildings where application is made to tear down and no application is made for a permit to erect a new building upon the same ground, the fee shall be two (\$2) dollars.

For the inspection and examination of any building or buildings already erected, upon complaint in due form as to being dangerous, said building or buildings not exceeding four (4) stories in height, the fee for each building shall be ten (\$10) dollars, and for each additional story an additional sum of one (\$1) dollar. The fee shall be deposited with the Chief of the Bureau, but shall not be retained after the inspection and examination is made, unless the Inspector making the examination shall certify to the Chief that, in his judgment, the complaint was groundless or malicious.

For fence views the fee shall be three (\$3) dollars, fixed by Act of Assembly, approved May 6, 1870.

For the inspection of frame shed and overhanging bath to dwelling house already erected the fee for each shall be one (\$1) dollar.

For the inspection of a bay or oriel window the fee shall be two (\$2) dollars.

For the inspection of open shelter sheds, when not exceeding a superficial area of five hundred (500) feet, the fee shall be one (1) dollar; for each additional five hundred (500) feet or part thereof the fee shall be fifty (50) cents.

For the inspection of boiler and engine foundations in buildings in which the same has not been heretofore introduced, and in any new building in which the application for the permit for the erection of the said building does not include the introduction of a boiler or engine, the fee for the same shall be two (\$2) dollars.

SEC. 2. All ordinances or parts of ordinances inconsistent herewith be and the same are hereby repealed.

Fire-Escape Law.

Philadelphia.—(Act of Assembly, approved July 12, 1897.) Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania, in general assembly met, and it is hereby enacted by the authority of the same, that all the following described buildings within this Commonwealth, to wit: * * * Every tenement house or other building in which rooms or floors are usually let to lodgers or families, shall be provided with a permanent, safe, external means of escape therefrom, in case of fire, independent of all internal stairways; the number and location of such escapes to be governed by the size of the building and the number of its inmates, and arranged in such a way as to make them readily accessible, safe and adequate for the escape of said inmates. Such escapes to consist of outside, open, iron *stairway*, of not more than 45 degrees slant, with steps not less than 6 inches in width and 24 inches in length. And all of said buildings, capable of accommodating from one hundred to five hundred or more persons, shall be provided with two such stairways, and more than two stairways if such be necessary to secure the speedy and safe escape of said inmates, in case the internal stairways are cut off by fire or smoke. And it shall be the duty of the owner or owners in fee, for life, of every such building, and of the trustee or trustees of every estate, association, society, college, seminary, academy, hospital or asylum owning or using any such building, to provide and cause to be securely affixed, outside of every such building, such

permanent, external, unenclosed fire-escape; provided that nothing herein contained shall prohibit any person whose duty it is under this act to erect fire-escapes, from selecting and erecting any other and different device, design or instrument, being a permanent, safe, external means of escape, subject to the inspection and approval of the constituted authorities for that purpose.

SEC. 2. It shall be the duty of the Board of Fire Commissioners, in conjunction with the Fire Marshal of the district where such Commissioners and Fire Marshal are elected or appointed, to first examine and test such fire-escape or escapes, and after, upon trial, said fire-escape or escapes should prove to be in accordance with the requirements of Section 1 of this act, then the said Fire Marshal, in connection with the Fire Commissioners, or a majority of them, shall grant a certificate approving said fire-escape, thereby relieving the party or parties to whom such certificate is issued from the liabilities of fines, damages and imprisonment imposed by this act: Provided, further, that in counties where no such Fire Marshal or Fire Commissioners exist, then the County Commissioners in each said county shall be the Board of Examiners, and shall grant certificates of approval when escapes are erected in accordance with the requirements of Section 1 of this act.

SEC. 3. That every person, corporation, trustee, Board of Education and Board of School Directors neglecting or refusing to comply with the requirements of Section 1 of this act, in erecting said fire-escape or escapes, shall be liable to a fine not exceeding three hundred dollars; and also be deemed guilty of a misdemeanor, punishable by imprisonment for not less than one month or more than two months. And, in case of fire occurring in any of said buildings in the absence of such fire-escape or escapes, approved by certificate of said officials, the said persons or corporations shall be liable in an action for damages in case of death or personal injuries sustained in consequence of such fire breaking out in said building; and

shall also be deemed guilty of a misdemeanor, punishable by imprisonment for not less than six months nor more than twelve months; and such action for damages may be maintained by any person now authorized by law to sue as in other cases of similar injuries; provided, that nothing in this act shall interfere with fire-escapes now in use approved by the proper authorities.

Fire-Escapes—Details of Construction.

Philadelphia.—(In accordance with the Act of Assembly, approved June 3, 1885, and the ordinance of councils, approved December 10, 1896, and supplemental thereto, the following formula will govern the matter of the design, construction and erection of all fire-escapes hereafter required within the City of Philadelphia.)

Platforms.—The platforms shall consist of iron balconies not less than four (4) feet in width, the length of the platform to be dependent upon the size of the building and the number of its occupants. The Inspector of the district will designate the length of such platform, which shall extend in front of, and not less than nine (9) inches beyond, at least two windows, except in the case of a doorway leading from the floor level of the building to the floor level of the platform, in which case such doorway opening will suffice. Each platform shall be provided with a landing at the head and foot of each stairway of not less than twenty-four (24) inches. The stairway opening of the top platform to be no longer than sufficient to provide clear headway. The floors of balconies must be of wrought iron or steel, one and one-half ($1\frac{1}{2}$) inches by five-sixteenths ($\frac{5}{16}$) inch slats, not more than one and one-fourth ($1\frac{1}{4}$) inches apart, and be securely riveted to frame and brackets. Outside angle frame to be not less than two and one-fourth ($2\frac{1}{4}$) inch angle iron. If flooring is made of wire, same to be not less than No. 6 wire gauge, three-fourths ($\frac{3}{4}$) inch mesh, securely fastened to frame and brackets. All stair openings to be sufficient to provide clear headway. In all cases platforms must be de-

signed, constructed and erected to safely sustain in all their parts a safe load, at a ratio of four to one, of not less than eighty pounds per square foot of surface.

Railings.—The outside top railing to extend around the entire length of the platform, and through the wall at each end, and to be properly secured by nuts and washers, or otherwise equally well braced and bolted. The top rail of the balcony must not be less than one (1) inch pipe iron, or material equally as strong. The bottom rail must not be less than three-fourths ($\frac{3}{4}$) inch pipe iron, or material equally as strong, well leaded into the wall. The standards must be not less than one (1) inch pipe iron, or material equally as strong, and must be securely connected with top and bottom rail and platform frame. Standards must also be securely braced by means of outside brackets at suitable intervals. Railings in all cases to extend around the stairway openings and be continuous down the stairway. The height of the railing to be not less than three (3) feet.

Stairways.—Stairways must be designed, constructed and erected to safely sustain in all their parts a safe load, at a ratio of four to one, of not less than one hundred (100) pounds per step, with the exception of the tread, which must safely sustain, at a ratio of four to one, a load of two hundred (200) pounds per tread. The treads to be not less than six (6) inches wide and the rise not more than ten (10) inches. The stairs in all cases to be not less than twenty-four (24) inches wide, and the strings or horses to be not less than three (3) inch channels of iron or steel, or other shape equally as strong and to rest upon and be fastened to a bracket; said bracket to be fastened through the wall as otherwise provided for brackets. The strings or horses to be also securely fastened to the balcony at the top. The steps in all cases to be double riveted or bolted to the strings or horses.

Brackets.—Brackets must not be less than two and one-fourth ($2\frac{1}{4}$) inch angle iron, or material equally as strong, not more than three (3) feet apart, braced by

means of not less than one (1) inch square, or one and one-fourth ($1\frac{1}{4}$) inch round iron, let into the wall at least four (4) inches, with shoulders on brace, and three (3) inch washer between shoulder and wall, and to extend down the wall four (4) feet from the top of the bracket, and out on the bracket angle three (3) feet from the wall. In all cases the bracket angle directly under the balcony must be secured to the wall by means of bolts of suitable size passing through the wall, and four (4) inch washers. There must also be a bar of wrought iron or steel two (2) inches by three-eighths ($\frac{3}{8}$) inch, let into the wall four (4) inches edgewise, between the brackets, and riveted to the balcony for the floor to rest upon. Whenever the bottom balcony is supported by means of suspension rods (riveted or bolted) to the balcony above, the brackets (of the above balcony) shall be increased in size to meet the increased strain occasioned thereby. The bottom balcony to have a drop ladder of same construction as the stairway, to be hinged and hung with a counterweight. Whenever the drop ladder is upheld by means of a counterbalance weight suspended to a chain, such weight shall hang within the platform railing if practicable.

In all cases the bolts, rivets and other material used shall be proportioned so as to develop the full strength of the members connected by them.

All the parts of such fire-escapes must receive not less than two coats of paint--one coat in the shop, and one after erection.

Height of Tenement Houses, Limitation of.

Boston.—(Chapter 419 of the Laws of 1892 of the Commonwealth of Massachusetts as amended.) Sections 25 and 107.—The external walls of every building hereafter erected for or converted to use as a tenement or lodging house shall be of brick, stone or iron, and such walls of any such building which is not situated on an open space more than 20 feet in width shall not exceed 30 feet in height. Section 25.—No building or other structure here-

after erected shall be of a height exceeding two and one-half times the width of the widest street on which the building or structure stands, whether such street is a public street or place, or a private way, existing at the passage of this act or thereafter approved as provided by law, nor exceeding 125 feet in any case; such width to be the width from the face of the building or structure to the line of the street on the other side, or if the street is of uneven width, such width to be the average width of the part of the street opposite the building or structure. If the effective width of the street is increased by an area or set-back the space between the face of the main building and the lawfully established line of the street may be built upon to the height of 20 feet.

Height of Tenement Houses, Limitation of.

Buffalo.—(Revised City Charter relating to the Department of Health, in force August 1, 1897.) Title VIII, Section 129.—The exterior walls of every building hereafter erected for or converted to use as a tenement or lodging house, and not having an exposure on an open space, street, court or passageway more than 20 feet in width, shall not exceed 30 feet in height.

Height of Tenement Houses, Limitation of.

Milwaukee.—(An ordinance (No. 53), relating to the construction, maintenance and inspection of buildings in the City of Milwaukee, passed May 13, 1895, as amended by (No. 28) an ordinance to amend an ordinance relating to the construction, maintenance and inspection of buildings in the City of Milwaukee, passed April 13, 1896.) Section 13.—The face of any building hereafter built in the City of Milwaukee shall not exceed in height two and two-thirds the distance from such face to the center of the street.

Height of Tenement Houses, Limitation of.

Washington.—(Building regulations of the District of Columbia, made and promulgated July 31, 1897, in accord-

ance with authority vested in the Commissioners of the District of Columbia by an Act of Congress, approved June 14, 1878.) Section 40.—No building shall be erected or altered on any street in the District of Columbia to exceed in height above the sidewalk the width of the street in its front, and in no case shall a building exceed 90 feet in height on a residence street, nor 110 feet on a business street. The height of buildings on corner lots shall in all cases be regulated by the limitations governing on the broader street. The width of the streets in so far as it controls the height of buildings under this law may be held to be the distance between building lines.

Licensing of Architects.

Chicago.—(An ordinance to regulate the construction of buildings, passed by the City Council, March 28, 1898.) Section 36.—No permit shall be granted, or plans approved, unless such plans shall be signed and sealed by a licensed architect as provided in “An act to provide for the licensing of architects and regulating the practice of architecture as a profession in the State of Illinois,” approved June 3, 1897.

Licensing of Builders and Contractors.

Chicago.—(An ordinance to regulate the construction of buildings, passed by the City Council, March 28, 1898.) Section 219. At the expiration of thirty days after the printing and publication of said building ordinances each and every person, agent, firm, company or corporation engaged within the limits of the City of Chicago in the construction or repairing of the whole or any part of buildings and appurtenances, shall be and he or it is hereby required to obtain a license from the City of Chicago, which shall permit him or it to engage thereafter in the business of contracting for the erection of buildings and appurtenances or parts thereof.

Every application for such license shall be made on printed blanks furnished by the city, and shall set forth

the name and residence or place of business of the applicant, and the nature of the contracts which he or it desires to engage in for a period of one year thereafter, and shall be accompanied by a fee of \$2.

The city shall thereupon issue a license in due form, permitting the applicant to engage in the business of contracting for the erection of buildings and appurtenances, or parts thereof, in the City of Chicago, for one year from the date of such license, which date shall be the first day of May in the year in which such license is applied for, and no license shall be granted for any period less than a year, and all licenses shall run from the first day of May in each year until the 30th day of April in the succeeding year. The applicant shall also receive, free of charge, with his license, a copy of said compilation of the building ordinances, and all building ordinances which may be passed after the publication of said compilation.

Nothing herein shall be construed as to make any change in the proper fees as now prescribed in the city ordinances to be paid to the City of Chicago for every 25 feet of street frontage so used.

Any person, agent, firm, company or corporation, who shall after the date fixed as aforesaid for the issuance of licenses, engage in the business of building in the City of Chicago, under contracts for the whole or any part of building and appurtenances, without first having obtained a license therefor, as aforesaid, shall be deemed guilty of a misdemeanor for each day's violation of the provisions of this ordinance, and shall be subject to a fine for each offense of not less than \$25 nor more than \$100.

All fees and fines collected under the provisions of this ordinance shall be set aside and constitute a fund to defray the expense of the compilation and publication of the building ordinances of the city, as aforesaid, and from time to time, as may be required, and any surplus shall from time to time be paid into the general fund.

Overcrowding—Amount of Air Space.

Washington.—(Regulations concerning the use and occupancy of buildings and grounds, promulgated by the Commissioners of the District of Columbia, April 22, 1897.) Section 4.—No room in any tenement or lodging house shall be occupied as a sleeping-room, unless there are at least 400 feet cubic contents for each person therein, not less than ten years of age. The Health Officer is hereby authorized, if in his judgment it is necessary to secure compliance with this requirement, to cause to be affixed to or near the door of each such room a placard stating the number of occupants allowed under this regulation, and shall, in any case, where such placard has been affixed, cause a notice stating such number to be served on the owner, agent or person having charge of the premises. No person having authority to prevent shall permit to occupy any such room as a sleeping-room any greater number of persons than are specified on such placard, if any, or otherwise authorized under this section.

Percentage of Lot and Open Spaces.

Philadelphia.—(Section 2 of the Act of Assembly of June 7, 1895.)—Every tenement house hereafter erected, altered or constructed in any city of the first class, shall have attached to it in the rear or at the side an open space equal in area to at least 20 per centum of the entire area of the lot upon which said tenement house is erected, which open space shall be unobstructed by any overhanging structure, except fire-escapes required by law, unless, however, such tenement house shall be erected upon a corner of two streets, neither of which is less than 20 feet in width, in which case said tenement house shall have an open space attached to it in the rear or at the side next the adjoining lot, equal in area to at least 10 per centum of the entire area of the lot upon which said tenement house is erected, which open space shall be unobstructed by any overhanging structure, except fire-escapes required by law; and any such tenement house which

shall be erected upon a lot bounded on three sides by streets not less than 20 feet in width may be erected to cover the entire area of said lot ; provided, that every window opening from the living-rooms in said tenement house shall open upon one of such streets. Such open space attached to every such tenement house shall be at least 8 feet in width throughout its entire length. No court or open space between tenement houses or between wings of a tenement house shall be of a less width than 12 feet. If such tenement house shall be built upon a lot which is bounded upon two opposite sides by streets, then at least one end of every such open space shall abut upon one of such streets. Every court or shaft which shall be built for the purpose of furnishing light or air to any such tenement house shall open upon one side into a street or into the yard or open space, except such shafts as may be necessary for the ventilation of water-closets or bath-rooms.

Percentage of Lot—Open Spaces.

Buffalo.--(Revised City Charter relating to the Department of Health, in force August 1, 1897.) Title VIII, Sections 132 and 122.—Every tenement or lodging house must have one or more yard-courts, and may have supplementary or inner courts. The sum of the areas of these courts must equal at least 25 per cent. of the building lot, except in case of a corner lot, when such area shall not be less than 10 per cent. of the lot. If in any case 25 per cent. of the building lot shall not equal the size of yard-court as herein provided, then such lot shall not have a tenement or lodging-house erected or maintained thereon. This section shall not apply to buildings now used as tenements.

Definition of “Yard-Court.”—A “Yard-Court” means any court not open to the public way or park, and contained entirely on the owner’s lot, but not less than 10 feet wide, and containing at least 250 square feet in area.

Definition of “Supplementary Court.”—A “Supple-

mentary Court" means any court opening on one side to a yard, court, public way or park, and must be at least 6 feet wide for one and two-story buildings, and at least 8 feet wide for three and four-story buildings, and one foot wider for each additional story above four stories.

Definition of "Inner Court."—"Inner Court" means any court in the interior of a building for the purpose of a light well, but in no case are inner courts to be less than 8 feet wide and 10 feet deep.

Definition of "Court."—A "Court" means an open space, yard or area open to the sky undiminished from ground to roof.

